Roland®

GENERAL MIDI2

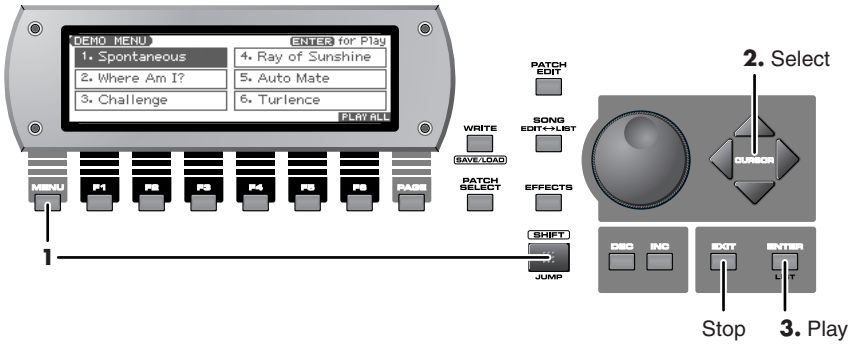
Fantom Xa

Owner's Manual

Thank you, and congratulations on your choice of the Roland Fantom-Xa.

Before using this unit, carefully read the sections entitled: "USING THE UNIT SAFELY" and "IMPORTANT NOTES" (p. 2; p. 4). These sections provide important information concerning the proper operation of the unit. Additionally, in order to feel assured that you have gained a good grasp of every feature provided by your new unit, Owner's manual should be read in its entirety. The manual should be saved and kept on hand as a convenient reference.

Listening to the Demo Song



1. Hold down [SHIFT] and press [MENU].

2. Use [CURSOR] to select a song.

3. Press [ENTER] to start demo song playback.
To stop the song, press [EXIT].

* *The explanations in this manual include illustrations that depict what should typically be shown by the display. Note, however, that your unit may incorporate a newer, enhanced version of the system (e.g., includes newer sounds), so what you actually see in the display may not always match what appears in the manual.*

USING THE UNIT SAFELY

INSTRUCTIONS FOR THE PREVENTION OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS

Used for instructions intended to alert the user to the risk of death or severe injury should the unit be used improperly. * 418133415.7985m 43118133419 T.001 S BT /F0 0 9 215.5108 l 6.4635 54 0 (Th)Tj T*/F7 Tf 9 540 9 1432.989

Used for instructions intended to alert the user to the risk of injury or material damage should the unit be used improperly.

* Material damage refers to damage or other adverse effects caused with respect to the home and all its furnishings, as well to domestic animals or pets.

ALWAYS OBSERVE THE FOLLOWING

- Before using this unit, make sure to read the instructions below, and the Owner's Manual.

- Do not open or perform any internal modifications on the unit or its AC adaptor. (The only exception would be where this manual provides specific instructions which should be followed in order to put in place user-installable options; see p. 214, p. 216.)

- Do not attempt to repair the unit, or replace parts within it (except when this manual provides specific instructions directing you to do so). Refer all servicing to your retailer, the nearest Roland Service Center, or an authorized Roland distributor, as listed on the "Information" page.

- Never use or store the unit in places that are:
  - Subject to temperature extremes (e.g., direct sunlight in an enclosed vehicle, near a heating duct, on top of heat-generating equipment); or are
  - Damp (e.g., baths, washrooms, on wet floors); or are
  - Humid; or are
  - Exposed to rain; or are
  - Dusty; or are
  - Subject to high levels of vibration.

- This unit should be used only with a rack or stand that is recommended by Roland.

- When using the unit with a rack or stand recommended by Roland, the rack or stand must be carefully placed so it is level and sure to remain stable. If not using a rack or stand, you still need to make sure that any location you choose for placing the unit provides a level surface that will properly support the unit, and keep it from wobbling.

- Be sure to use only the AC adaptor supplied with the unit. Also, make sure the line voltage at the installation matches the input voltage specified on the AC adaptor's body. Other AC adaptors may use a different polarity, or be designed for a different voltage, so their use could result in damage, malfunction, or electric shock.

- Use only the attached power-supply cord. Also, the supplied power cord must not be used with any other device.

- Do not excessively twist or bend the power cord, nor place heavy objects on it. Doing so can damage the cord, producing severed elements and short circuits. Damaged cords are fire and shock hazards!

- This unit, either alone or in combination with an amplifier and headphones or speakers, may be capable of producing sound levels that could cause permanent hearing loss. Do not operate for a long period of time at a high volume level, or at a level that is uncomfortable. If you experience any hearing loss or ringing in the ears, you should immediately stop using the unit, and consult an audiologist.

⚠ WARNING

- Do not allow any objects (e.g., flammable material, coins, pins); or liquids of any kind (water, soft drinks, etc.) to penetrate the unit.

- Immediately turn the power off, remove the AC adaptor from the outlet, and request servicing by your retailer, the nearest Roland Service Center, or an authorized Roland distributor, as listed on the "Information" page when:
  - The AC adaptor, the power-supply cord, or the plug has been damaged; or
  - If smoke or unusual odor occurs
  - Objects have fallen into, or liquid has been spilled onto the unit; or
  - The unit has been exposed to rain (or otherwise has become wet); or
  - The unit does not appear to operate normally or exhibits a marked change in performance.

- In households with small children, an adult should provide supervision until the child is capable of following all the rules essential for the safe operation of the unit.

- Protect the unit from strong impact.
  (Do not drop it!)

- Do not force the unit's power-supply cord to share an outlet with an unreasonable number of other devices. Be especially careful when using extension cords—the total power used by all devices you have connected to the extension cord's outlet must never exceed the power rating (watts/amperes) for the extension cord. Excessive loads can cause the insulation on the cord to heat up and eventually melt through.

- Before using the unit in a foreign country, consult with your retailer, the nearest Roland Service Center, or an authorized Roland distributor, as listed on the "Information" page.

- Always turn the unit off and unplug the AC adaptor before attempting installation of the circuit board (SRX series; p. 214, DIMM; p. 216).

- DO NOT play a CD-ROM disc on a conventional audio CD player. The resulting sound may be of a level that could cause permanent hearing loss. Damage to speakers or other system components may result.

⚠ CAUTION

- The unit and the AC adaptor should be located so their location or position does not interfere with their proper ventilation.

- This unit for use only with Roland stand KS-12. Use with other stands (or carts) is capable of resulting in instability causing possible injury.

- Always grasp only the plug on the AC adaptor cord when plugging into, or unplugging from, an outlet or this unit.

- At regular intervals, you should unplug the AC adaptor and clean it by using a dry cloth to wipe all dust and other accumulations away from its prongs. Also, disconnect the power plug from the power outlet whenever the unit is to remain unused for an extended period of time. Any accumulation of dust between the power plug and the power outlet can result in poor insulation and lead to fire.

- Try to prevent cords and cables from becoming entangled. Also, all cords and cables should be placed so they are out of the reach of children.

- Never climb on top of, nor place heavy objects on the unit.

- Never handle the AC adaptor or its plugs with wet hands when plugging into, or unplugging from, an outlet or this unit.

- Before moving the unit, disconnect the AC adaptor and all cords coming from external devices.

- Before cleaning the unit, turn off the power and unplug the AC adaptor from the outlet (p. 16).

- Whenever you suspect the possibility of lightning in your area, disconnect the AC adaptor from the outlet.

- Install only the specified circuit board (SRX series, DIMM). Remove only the specified screws (p. 214, p. 216).

- Should you remove the ground terminal screw or screws that fasten the bottom cover or the PC card protector, keep them in a safe place out of children's reach, so there is no chance of them being swallowed accidentally.

IMPORTANT NOTES

In addition to the items listed under "USING THE UNIT SAFELY" on page , please read and observe the following:

Power Supply

- Do not connect this unit to same electrical outlet that is being used by an electrical appliance that is controlled by an inverter (such as a refrigerator, washing machine, microwave oven, or air conditioner), or that contains a motor. Depending on the way in which the electrical appliance is used, power supply noise may cause this unit to malfunction or may produce audible noise. If it is not practical to use a separate electrical outlet, connect a power supply noise filter between this unit and the electrical outlet.

- The AC adaptor will begin to generate heat after long hours of consecutive use. This is normal, and is not a cause for concern.

- Before connecting this unit to other devices, turn off the power to all units. This will help prevent malfunctions and/or damage to speakers or other devices.

Placement

- Using the unit near power amplifiers (or other equipment containing large power transformers) may induce hum. To alleviate the problem, change the orientation of this unit; or move it farther away from the source of interference.

- This unit may interfere with radio and television reception. Do not use this device in the vicinity of such receivers.

- Noise may be produced if wireless communications devices, such as cell phones, are operated in the vicinity of this unit. Such noise can occur when receiving or initiating a call, or while conversing. Should you experience such problems, you should relocate such wireless devices so they are at a greater distance from the unit, or switch them off.

- Do not expose the unit to direct sunlight, place it near devices that radiate heat, leave it inside an enclosed vehicle, or otherwise subject it to temperature extremes. Excessive heat can deform or discolor the unit.

- When moving the unit from one location to another where the temperature and/or humidity is very different, water droplets (condensation) may form inside the unit. Damage or malfunction may result if you attempt to use the unit in this condition. Therefore, before using the unit, you must allow it to rest for several hours, until the condensation has completely evaporated.

- Do not allow objects to fall on top of the unit, and do not put heavy objects on top of it, as this may be the cause of malfunctions, such as loss of sound.

Maintenance

- For everyday cleaning, wipe the unit with a soft, dry cloth or one that has been slightly moistened with water. To remove stubborn dirt, use a cloth impregnated with a mild, non-abrasive detergent. After cleaning, wipe the unit thoroughly with a soft, dry cloth.

- Never use benzine, thinners, alcohol or solvents of any kind, to avoid the possibility of discoloration and/or deformation.

Repairs and Data

- Please be aware that all data contained in the unit's memory may be lost when the unit is sent for repairs. Important data should always be backed up on a memory card, or written down on paper (when possible). During repairs, due care is taken to avoid the loss of data. However, in certain cases (such as when circuitry related to memory itself is out of order), we regret that it may not be possible to restore the data, and Roland assumes no liability concerning the loss of data.

Additional Precautions

- Please be aware that the contents of memory can be irrecoverably lost as a result of a malfunction, or the improper operation of the unit. To protect yourself against the risk of loosing important data, we recommend that you periodically save a backup copy of important data you have stored in the unit's memory on a memory card or other device.

- Unfortunately, it may be impossible to restore the contents of data that was stored on a memory card, memory, or other device once it has been lost. Roland assumes no liability concerning such loss of data.

- Use a reasonable amount of care when using the unit's buttons, sliders, or other controls; and when using its jacks and connectors. Rough handling can lead to malfunctions.

- Never strike or apply excessive pressure to the display.

- When connecting/disconnecting all cables, grasp the connector itself—never pull on the cable. This way you will avoid causing shorts, or damage to the cable's internal elements.

- Regardless of your neighbors, try to keep the unit's volume at reasonable levels. You may prefer to use headphones, so you do not need to be concerned about those around you (especially when it is late at night).

  When you need to transport the unit, package it in the box (including padding) that it came in, if possible. Otherwise, you will need to use equivalent packaging materials.

- Use only the specified expression pedal (EV-5; sold separately). By connecting any other expression pedals, you risk causing malfunction and/or damage to the unit.

- Only use cable from Roland to make the connection. If using some other make of connection cable, please note the following precautions.
  - Some connection cables contain resistors. Do not use cables that incorporate resistors for connecting to this unit. The use of such cables can cause the sound level to be extremely low, or impossible to hear. For information on cable specifications, contact the manufacturer of the cable.

- The usable range of D Beam controller will become extremely small when used under strong direct sunlight. Please be aware of this when using the D Beam controller outside.

- The sensitivity of the D Beam controller will change depending on the amount of light in the vicinity of the unit. If it does not function as you expect, adjust the sensitivity as appropriate for the brightness of your location.

Before Using Cards

Using Memory Cards

- Carefully insert the memory card all the way in—until it is firmly in place.
- Never touch the terminals of the memory card. Also, avoid getting the terminals dirty.
- This unit's memory card slot accepts CompactFlash or SmartMedia (3.3 V). Microdrive storage media are not compatible.
- CompactFlash and SmartMedia (3.3 V) cards are constructed using precision components; handle the cards carefully, paying particular note to the following.
  - To prevent damage to the cards from static electricity, be sure to discharge any static electricity from your own body before handling the cards.
  - Do not touch or allow metal to come into contact with the contact portion of the cards.
  - Do not bend, drop, or subject cards to strong shock or vibration.
  - Do not keep cards in direct sunlight, in closed vehicles, or other such locations (storage temperature: -25 to 85° C).
  - Do not allow cards to become wet.
  - Do not disassemble or modify the cards.

Handling CD-ROMs

- Avoid touching or scratching the shiny underside (encoded surface) of the disc. Damaged or dirty CD-ROM discs may not be read properly. Keep your discs clean using a commercially available CD cleaner.

Copyright

- Unauthorized recording, distribution, sale, lending, public performance, broadcasting, or the like, in whole or in part, of a work (musical composition, video, broadcast, public performance, or the like) whose copyright is held by a third party is prohibited by law.
- Do not use this unit for purposes that could infringe on a copyright held by a third party. We assume no responsibility whatsoever with regard to any infringements of third-party copyrights arising through your use of this unit.

Contents

Main Features

The Fantom-Xa is a high-quality workstation synthesizer that makes pro-quality sound, playability, and compositional power available to everyone. The latest sound generator, versatile effects, a powerful sequencer, and a sampler that lets you record, process and play vocals or audio phrases—all brought together in a user-friendly system. The features listed below make the Fantom-Xa a great choice for any style of music, in applications ranging from stage performance to composition and arranging.

The latest sound engine with 128-voice polyphony

The Fantom-Xa provides 128 voices of polyphony—the standard for the new era. You'll have plenty of power for multitrack sequencer recording and for layering complex sounds. The sound engine melds the latest synthesizer technology with a sampler. Sampled waveforms imported from your computer or other external device can be synthesized just like the internal waveforms.

Highly expandable waveform memory

To supplement the Fantom-Xa's numerous new patches created from the carefully selected high-quality built-in waveforms, you can install one wave expansion board. Depending on your needs and your favorite musical styles, you can choose one board from the wide variety of professionally acclaimed Roland SRX series boards now available.

The sampler section provides 4 MB (approximately 47 seconds in monaural) of memory as standard, letting you sample immediately without having to install any options. You can install optional DIMM memory (up to 512 MB) to expand the sampling time to up to one and a half hours (monaural).

A full-fledged sampler section with Skip Back Sampling

The Fantom-Xa provides serious sampler functionality that rivals dedicated units, with sampling, resampling, and waveform editing in a graphic display.

Roland's proprietary Skip Back Sampling function lets you "retrospectively" capture a cool phrase that just played and would like to keep. Your inspired moments need never be lost again!

There's also an Auto Sync function, which matches a phrase sample to the measure length at the current tempo, and a Solo Sampling function, which lets you sample only an external vocal or guitar performance while listening to an accompaniment played by the internal sequencer. Both WAV and AIFF are supported as external wave formats, making it easy to transfer waveform data to and from PC or Mac.

Plenty of external interfacing

The rear panel USB connector supports both file transfer and USB-MIDI, and can be switched as desired. There's also a PC card slot that can accommodate SmartMedia or CompactFlash via a commercially available adaptor. You can use a card to store as much as 1 GB of data (when using CompactFlash).

Built-in high-resolution 16-track sequencer

The internal 16-track sequencer lets you record as soon as inspiration strikes—no need to think about entering any complex sequencer modes. Loop Recording lets you record each part without stopping, and you can use the Part Track buttons to quickly select each part and switch it on/off. The Fantom-Xa is designed to let your creative imagination flow freely into songs. In addition, songs you created on your computer-based sequencer (SMF format) can be transferred via PC card or USB into the Fantom-Xa, and used to play backing tracks while you play live on stage.

Trigger/Category pads

The Trigger/Category pads are a convenient feature that can also be used as a numeric key pad. You can use them to play percussion sounds or hits during a live performance, to trigger Realtime Phrase Sequences (RPS), or you can assign the pads to play skipback-sampled audio phrases.

Powerful effects including mastering functionality

The Fantom-Xa provides three multi-effects processors (78 types), plus independent chorus and reverb processors. There's a mastering effect, indispensable for adding the final touch to your production, bringing your sound CD-master level impact and audio quality.

Versatile sound control functionality

The versatile array of controllers includes a D Beam controller as well as realtime control knobs and assignable switches to which you can freely assign functions. There's also a hold pedal jack that can detect half-damper operation. The Fantom-Xa gives you complete control over your on-stage sound.

Fantom-X Editor/Librarian is included

Dedicated editor/librarian software is included, letting you edit and manage Fantom-Xa sounds from the large screen of your computer.

V-LINK functionality

V-LINK allows you to synchronize music and video, opening up completely new performance possibilities.

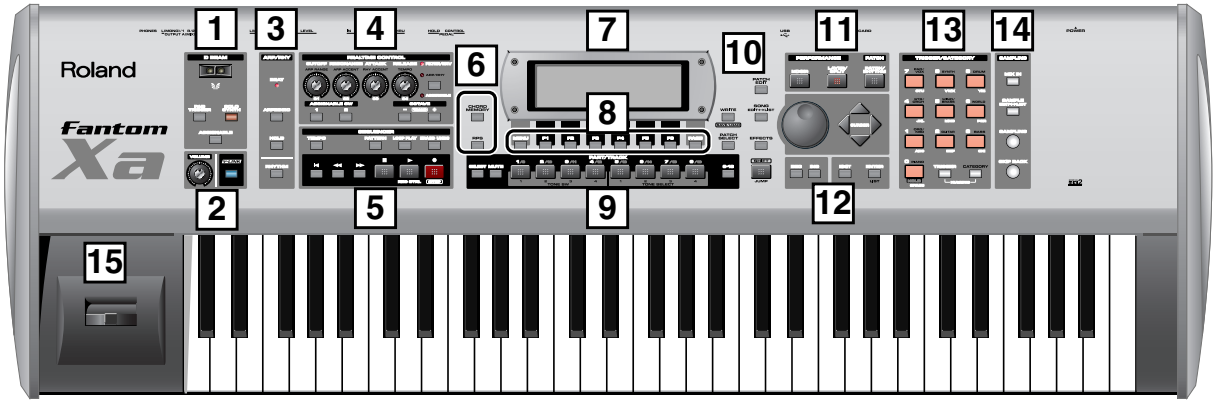
When used in combination with a V-LINK capable video device (such as the Edirol DV-7PR, PR-50, or V-4), you can use the realtime controllers and pads of the Fantom-Xa to control video as part of the act of playing music.

GM/GM2 compatibility

The Fantom-Xa is compatible with GM/GM2, and is able to play back music data that complies with the GM/GM2 standard (GM scores).

Panel Descriptions

Front Panel



1 D BEAM

Switches D Beam function on/off. You can apply a variety of effects to sounds simply by moving your hand (p. 80).

[PAD TRIGGER]

You can use the D Beam controller to control the sounding of the pads (p. 82).

[SOLO SYNTH]

Play the Fantom-Xa as a monophonic synthesizer (p. 81).

[ASSIGNABLE]

You can assign a variety of parameters and functions to D Beam to modify the sound in realtime (p. 82).

* *Hold down [SHIFT] and press one of the corresponding buttons to access the D BEAM setting screen.*

2

VOLUME knob

Adjusts the overall volume that is output from the rear panel OUTPUT A (MIX) jacks and PHONES jack (p. 16).

[V-LINK]

Switches the V-LINK function on/off (p. 212).

Press this button to access the V-LINK setting screen.

3 ARP/RHY

BEAT (Beat Indicator)

This blinks in sync with the tempo and beat.

[ARPEGGIO]

Switches the ARPEGGIO on/off (p. 86).

[HOLD]

Switches the Arpeggio Hold function on/off (p. 87).

[RHYTHM]

Switches the RHYTHM on/off (p. 94).

* *Hold down [SHIFT] and press [ARPEGGIO] or [RHYTHM] to access ARPEGGIO or RHYTHM setting screen.*

4 REALTIME CONTROL

REALTIME CONTROL knob (◎)

Depending on the parameter or function that is assigned, you can use the knobs to modify the sound in realtime (p. 83).

ASSIGNABLE switch ([▭¹], [▭²])

Use these buttons to switch the assigned parameter or function to modify the sound in realtime (p. 84).

* *Hold down [SHIFT] and press (or rotate) one of the above switches (or knobs) to access the corresponding setting screen.*

[OCTAVE] (+/-)

Transposes the pitch of the keyboard in 1 octave units (-3– +3 octaves) (p. 33).

* *Hold down [SHIFT] and press [OCTAVE] to transposes the pitch in semitones (p. 33).*

5 SEQUENCER

Perform sequencer operations such as playback and record.

[TEMPO]

Sets the tempo (BPM) (p. 120, p. 123).

[PATTERN]

Lets you edit or record patterns (p. 123, p. 124, p. 128).

[LOOP PLAY]

Turns Loop Play on/off (p. 121).

[ERASE/UNDO]

Cancels the most recent song edit or recording operation.

[|◀]

Moves the song position to the top. If you press this during playback, you will return to the beginning of the song and stop (p. 120).

[◀◀] [▶▶]

Moves the song position to the first beat of the previous or next measure (p. 120).

[■]

Controls sequencer stop.

[▶]

Controls sequencer play.

* *While stopped, you can hold down [SHIFT] and Press [▶] to perform MIDI Update (p. 120).*

[●]

The display changes to the Recording Standby window. (p. 124, p. 128)

If you press this during recording, the Rehearsal function will be activated (p. 127).

6

[CHORD MEMORY]
Switches the CHORD MEMORY on/off (p. 92).

[RPS]
Switches RPS on/off (p. 154).

* *Hold down [SHIFT] and press [CHORD MEMORY] or [RPS] to access the CHORD MEMORY or RPS setting screen.*

11

[MIXER]
View the Performance mode's Mixer screen (p. 70).

[LAYER/SPLIT]
View the Performance mode's Layer screen (p. 68).

[PATCH/RHYTHM]
Enter Patch/Rhythm mode (p. 29).

Display
This displays information regarding the operation you are performing.

8

[MENU]
Opens the MENU. The contents of the menu will depend on the current mode.

Function buttons ([F1]–[F6])
During editing, these buttons execute a variety of functions, and their function will differ depending on the screen.

[PAGE]
When this button is lit, you can use this to switch the screen.

* *Hold down [SHIFT] and press [PAGE] to access the LCD Contrast setting screen (p. 16).*

9 PART/TRACK

[SELECT]
If you press this in Performance mode, buttons [1]–[8] will function as Part Select buttons (p. 68, p. 70).

[MUTE]
If you press this in Performance mode, buttons [1]–[8] will function as Mute buttons (p. 71, p. 120).

[1]–[4] (TONE SW [1]–[4])
In Performance mode, these correspond to parts 1–4 (9–12).
In Patch mode, they turn tones or waves on/off (p. 33).

[5]–[8] (TONE SELECT [1]–[4])
In Performance mode, these correspond to parts 5–8 (13–16).
In Patch mode, they select the tone or wave to edit (p. 35, p. 55).

[9-16]
If you press this in Performance mode so it's lighted, buttons [1]–[8] will correspond to parts 9–16.

10

[WRITE]
Save edited settings into Temporary Area or a memory card (p. 37, p. 57, p. 72, p. 91, p. 93, p. 116, p. 150).

[PATCH SELECT]
View the PATCH SELECT screen (p. 31).

[PATCH EDIT]
Make patch-related settings (p. 35).

[SONG]
Make settings for song data and song edit (p. 119).

[EFFECTS]
Make effect-related settings (p. 157).

[SHIFT] (JUMP)
This button is used in conjunction with other buttons to execute various functions.

VALUE Dial
This is used to modify values. If you hold down [SHIFT] as you turn the VALUE dial, the value will change in greater increments.

[DEC], [INC]
This is used to modify values. If you keep on holding down one button while pressing the other, the value change accelerates. If you press one of these buttons while holding down [SHIFT], the value will change in bigger increments (p. 27).

[CURSOR] (▲ , ▼ , ◀ , ▶)
Moves the cursor location up/down/left/right (p. 27).

[EXIT]
Return to the previous screen, or close the currently open window. In some screens, this causes the currently executing function to be aborted.

[ENTER]
Use this button to execute an operation.

TRIGGER/CATEGORY

PAD [1]–[9]
Use these to play tones or samples, or to start patterns.

[HOLD] (PAD [0])
Turn "hold" (sustaining the sound after you release the pad) on/off (p. 117).

[TRIGGER]
If you press this so it's lighted, pads [1]–[9] will play tones or samples.

[CATEGORY]
If you press this so it's lighted, pads [0]–[9] will select patch categories (p. 32)

* *If you together press [TRIGGER] and [CATEGORY] so both are lighted, you can use pads [0]–[9] as a numeric keypad to enter numeric values (p. 27).*

SAMPLING

[MIX IN]
Switches the external input on/off (p. 101).

* *Hold down [SHIFT] and press this button to access the INPUT setting screen.*

[SAMPLE]
View the SAMPLE EDIT or SAMPLE LIST screen (p. 104, p. 106).

[SAMPLING]
View the Sampling Menu screen (p. 100).

[SKIP BACK SAMPLING]
Sample the performance for a specified duration prior to the moment you pressed the button (p. 103).

Pitch Bend/Modulation Lever
This allows you to control pitch bend or apply vibrato (p. 18).

Rear Panel

Ground T

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THRU)

cted to other MIDI devices to receive

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the external input.

acks (L (MONO)/MIC, R)

audio signals in stereo (L/R) from external devices.

o use mono input, connect to the L jack.

rding from a mic, connect it to the L jack, and set Input

00) to "MICROPHONE."

When c ables with resistors are used, the volume level of
quipm AUDIO INPUT jacks may be low. If this
happen do not contain resistors, such as
e f

/amplifier

Getting Ready

Connections

Since Fantom-Xa contains no amplifier or speakers, you'll need to connect it to audio equipment such as a keyboard amplifier, monitor speaker system or home stereo, or use headphones to hear its sound. In order to fully experience the Fantom-Xa's sound, we recommend using a stereo amp/speaker system. If you're using a mono system, however, make your connections to the Fantom-Xa's OUTPUT A (MIX) jack L (MONO).

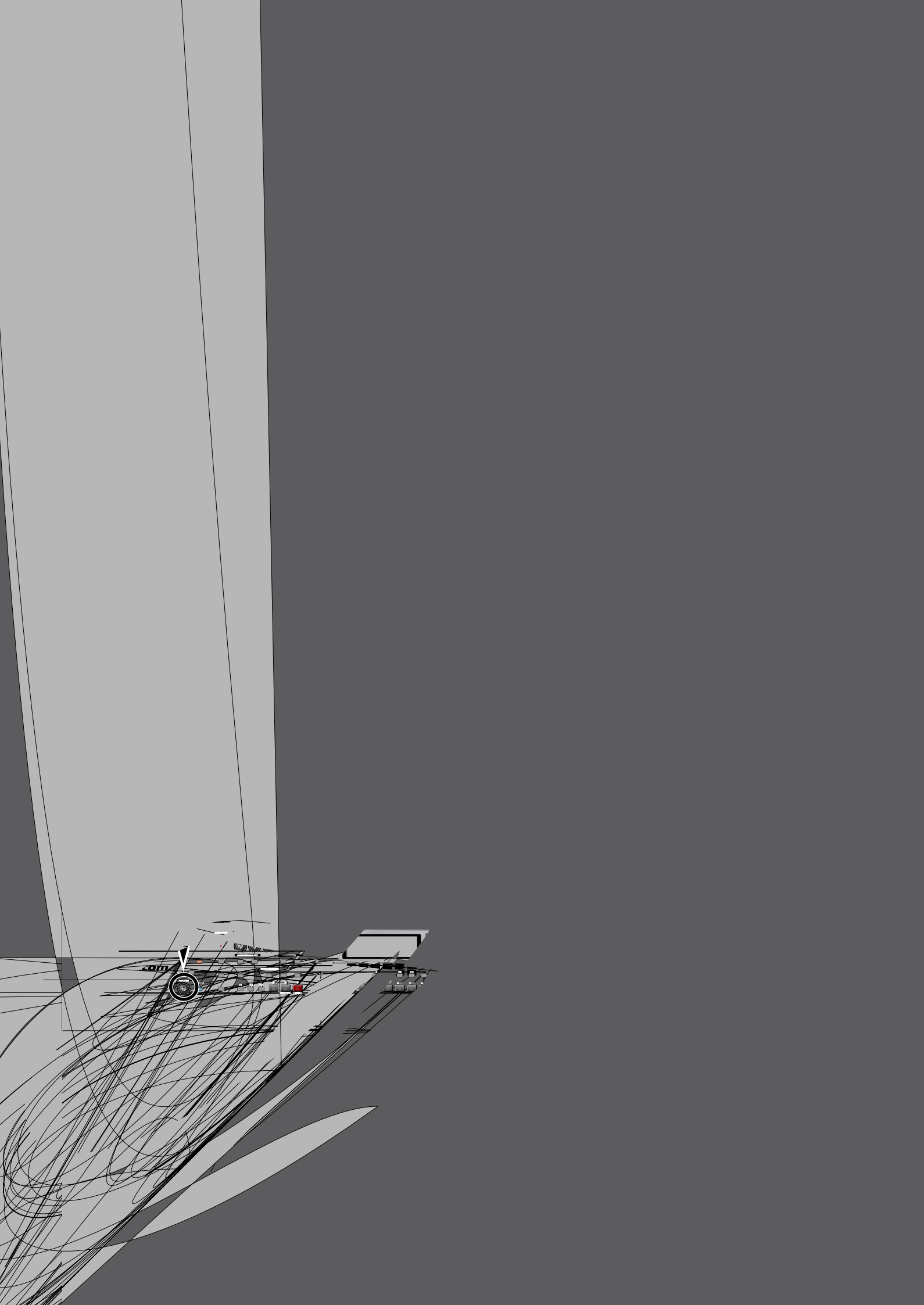
* *Audio cables are not included with the Fantom-Xa. You'll need to provide them.*

NOTE

To prevent malfunction and/or damage to speakers or other devices, always turn down the volume, and turn off the power on all devices before making any connections.

NOTE

To prevent the inadvertent disruption of power to your unit (should the plug be pulled out accidentally), and to avoid applying undue stress to the AC adaptor jack, anchor the power cord using the cord hook, as shown in the illustration.



Listening to the Demo Songs

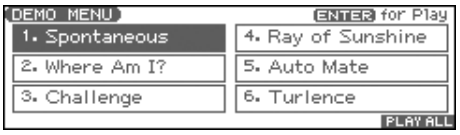
The internal demo songs will feature the Fantom-Xa's exceptional sounds and effects.

1. Press [MENU] to open the Top Menu Window.

2. Press ▼ to select "6. Demo Play."

3. Press [ENTER].

The DEMO MENU screen appears.



TIP

You can also access the DEMO MENU screen by holding down [SHIFT] and pressing [MENU].

4. Turn the VALUE dial or press [CURSOR] to select a song.

5. Press [ENTER] or [▶] to start playback.

Playback will stop automatically when the song ends.

If you press [F6 (PLAY ALL)], the songs will playback successively, beginning from the first.

* *Press [EXIT] or [■] to stop the demo song.*

6. Press [EXIT] to return to the previous screen.

MEMO

For the names and copyright information of these demo songs, refer to the Fantom-Xa's display.

* *All rights reserved. Unauthorized use of this material for purposes other than private, personal enjoyment is a violation of applicable laws.*

* *No data for the music that is played will be output from MIDI OUT.*

NOTE

When you perform demo playback, any patch or performance you may have been editing will be lost.

Various Performance Features

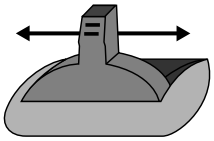
Velocity

The velocity—the force with which you play the keyboard—can affect the volume or timbre of a sound.

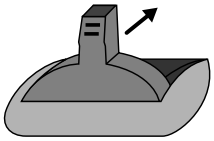
Pitch Bend/Modulation Lever

While playing the keyboard, move the lever to the left to lower the pitch of the currently selected patch, or to the right to raise its pitch (**pitch bend**). You can also apply vibrato by gently pushing the lever away from you (**modulation**).

If you push the lever away from you and at the same time move it to the right or left, you can apply both effects at once.



Pitch Bend



Modulation

Octave Shift

You can shift the pitch of the keyboard in one-octave units over a range of +/-3 octaves.

- Press OCTAVE [+] or [-] at the left of the screen.
- To return to the original pitch, press both buttons simultaneously.

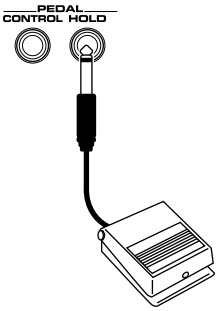
Transpose

You can transpose the pitch of the keyboard in semitone steps, over a range of G–F# (-5– +6 semitones).

- Hold down [SHIFT] and press OCTAVE [+] or [-].
- To return to the original pitch, hold down [SHIFT] and press both buttons simultaneously.

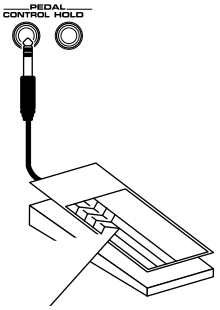
Hold Pedal

If an optional pedal switch (DP series) is connected to the rear panel PEDAL HOLD jack, you can press the pedal to cause notes to sustain or "hold" even after their keys have been released.



Control Pedal

If an optional expression pedal or pedal switch (EV-5, DP-2) is connected to the rear panel PEDAL CONTROL jack, you can use the pedal to control the volume or various function.



cf.

For details on pedal settings, refer to **Control Pedal Settings** (p. 85).

NOTE

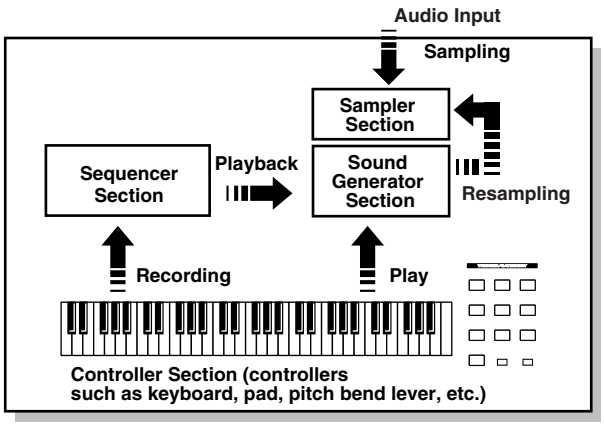
Use only the specified expression pedal or pedal switch (EV-5, DP-2; sold separately). By connecting any other expression pedals, you risk causing malfunction and/or damage to the unit.

Overview of the Fantom-Xa

How the Fantom-Xa Is Organized

Basic Structure

Broadly speaking, the Fantom-Xa consists of a controller section, a sound generator section, a sequencer section, and a sampler section. These sections are internally connected via MIDI.



Controller Section

This section consists of the keyboard, pad, pitch bend/modulation lever, panel knobs and buttons, and D Beam controller. It also includes any pedals that may be connected to the rear panel. The performance information generated when you do things such as press/release a key or pad, or depress the hold pedal is converted into MIDI messages and sent to the sound generator section, sequencer section, and/or an external MIDI device.

Sound Generator Section

The sound generator section produces the sound. It receives MIDI messages from the controller section and sequencer section and/or from an external MIDI device, generates musical sound according to the MIDI messages that were received, and outputs the sound from the output jacks or headphones jack.

Sequencer Section

This section records operations of the controller section as MIDI messages, and transmits the recorded MIDI messages to the sound generator section. MIDI messages recorded on the sequencer can also be transmitted from the MIDI OUT connector to allow the Fantom-Xa to also control external MIDI devices.

Sampler section

A sampler is a device that captures sounds from a CD player or mic connected to the input (or sounds from a wave file) as “samples.”

Samples you record can be used in the same way as the waveforms that are built into the internal sound generator (p. 100).

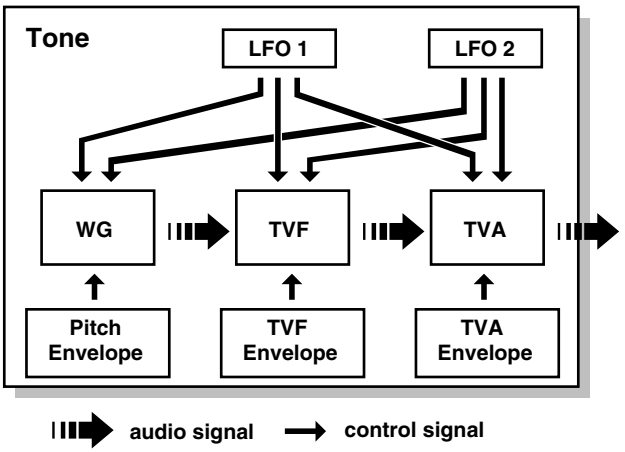
The Fantom-Xa can load WAV or AIFF format wave files as samples via a USB connection. Loaded sample can be used in patches or rhythm sets.

Classification of Fantom-Xa Sound Types

When using the Fantom-Xa, you will notice that a variety of different categories come into play when working with sounds. What follows is a simple explanation of each sound category.

Tones

On the Fantom-Xa, the tones are the smallest unit of sound. However, it is not possible to play a tone by itself. The patch is the unit of sound which can be played, and the tones are the basic building blocks which make up the patch.



Tones consist of the following five components.

WG (Wave Generator)

Specifies the PCM waveform (wave) that is the basis of the sound, and determines how the pitch of the sound will change.

The Fantom-Xa has 1228 different waveforms. All patches built into the Fantom-Xa consist of combinations of tones which are created based on these waveforms.

* *There are four wave generators for each rhythm tone (percussion instrument sounds).*

TVF (Time Variant Filter)

Specifies how the frequency components of the sound will change.

TVA (Time Variant Amplifier)

Specifies the volume changes and the sound’s position in a stereo soundfield.

Envelope

You use Envelope to initiate changes to occur to a sound over time. There are separate envelopes for Pitch, TVF (filter), and TVA (volume). For example if you wish to modify the way in which the sound attacks or decays over time, you would adjust the TVA envelope.

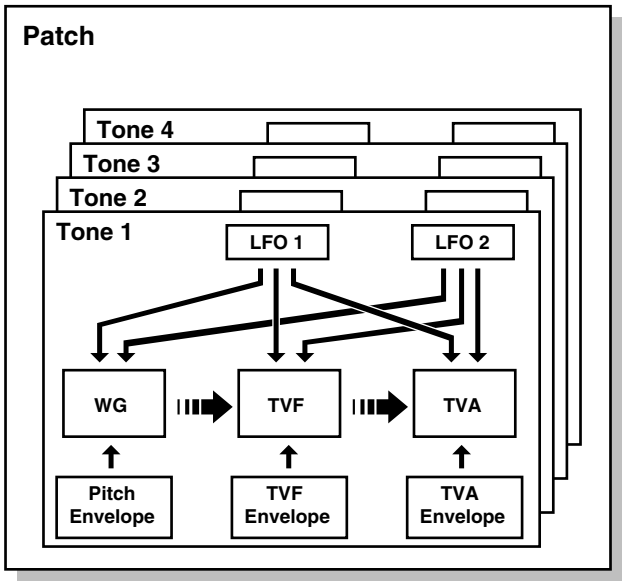
LFO (Low Frequency Oscillator)

Use the LFO to create cyclic changes (modulation) in a sound. The Fantom-Xa has two LFOs. You can use the LFO to apply an effect to either the WG (pitch), the TVF (filter), or the TVA (volume). When an LFO is applied to the WG pitch, a vibrato effect is produced. When an LFO is applied to the TVF cutoff frequency, a wah effect is produced. When an LFO is applied to the TVA volume, a tremolo effect is produced.

* *LFO is not included in the rhythm tones (percussion instrument sounds).*

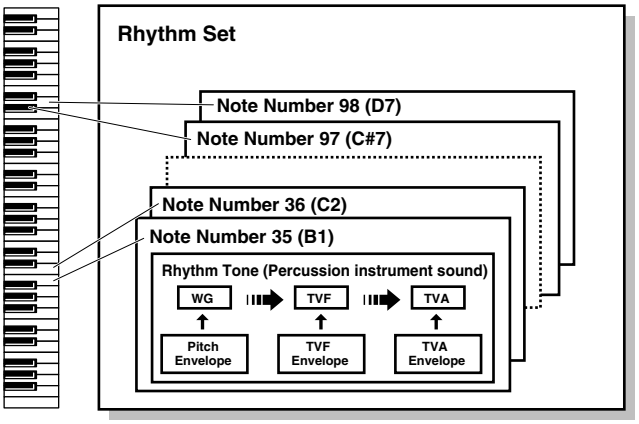
Patches

Patches are the basic sound configurations that you play during a performance. Each patch can be configured by combining up to four tones. How the four tones are combined is determined by the Structure Type parameter (p. 38).



Rhythm Sets

Rhythm sets are groups of a number of different percussion instrument sounds. Since percussion instruments generally do not play melodies, there is no need for a percussion instrument sound to be able to play a scale on the keyboard. It is, however, more important that as many percussion instruments as possible be available to you at the same time. Therefore, each key (note number) of a rhythm set will produce a different percussion instrument.



Each percussion instrument consists of the following four elements. (For details, refer to the explanations for "Tones.")

WG (Wave Generator): 1–4

TVF (Time Variant Filter)

TVA (Time Variant Amplifier)

Envelope

Performances

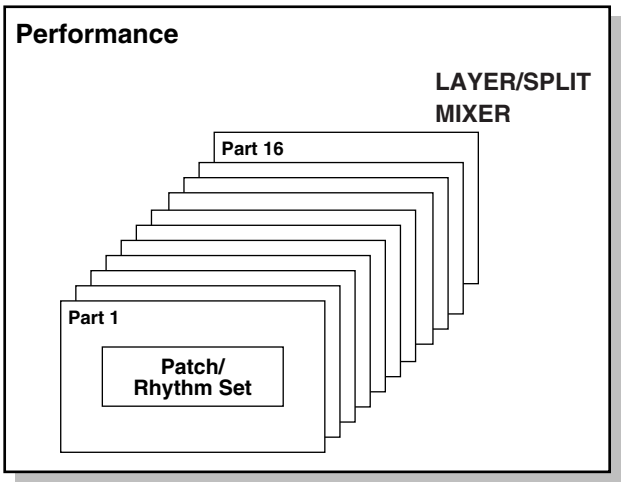
A performance has a patch or rhythm set assigned to each of the 16 parts, and can simultaneously handle 16 sounds.

The Fantom-Xa has two screens: a LAYER screen and a MIXER screen (p. 68, p. 70).

Use the LAYER screen if you want to play two or more patches together (Layer) or play different patches in separate areas of the keyboard (Split).

Use the MIXER screen if you want to "mix" by individually adjusting the pan and level settings for each of the sixteen parts.

Because the Fantom-Xa sound generator can control multiple sounds (instruments), it is called a Multi-timbral sound generator.



Part

On the Fantom-Xa, a "part" is something to which you assign a patch or rhythm set. Patch mode has two parts, the Pad part and the Keyboard part, and you can assign a patch or rhythm set to each of these parts. In Performance mode, each performance has sixteen parts, and you can assign a patch or rhythm set to each part.

About Simultaneous Polyphony

The Fantom-Xa can play a maximum of 128 sounds simultaneously. The following paragraphs discuss what this means, and what will happen when more than 128 simultaneous voices are requested from the Fantom-Xa.

Calculating the Number of Voices Being Used

The Fantom-Xa is able to play up to 128 notes simultaneously. The polyphony, or the number of voices (sounds) does not refer only to the number of patches actually being played, but changes according to the number of tones used in the patches, and the number of waves used in the tones. The following method is used to calculate the number of sounds used for one patch being played.

> (Number of patches being played) x (Number of tones used by patches being played) x (Number of waves used in the tones)

For example, a patch that combines four tones, each of which use two waves, will use eight notes of polyphony at once. Also, when playing in Performance mode, the number of sounds for each part is counted to obtain the total number of sounds for all parts.

How a Patch Sounds

When the Fantom-Xa is requested to play more than 128 voices simultaneously, currently sounding notes will be turned off to make room for newly requested notes. The note with the lowest priority will be turned off first. The order of priority is determined by the Patch Priority setting (p. 40).

Patch Priority can be set either to "LAST" or "LOUDEST." When "LAST" is selected, a newly requested note that exceeds the 128 voice limit will cause the first-played of the currently sounding notes to be turned off. When "LOUDEST" is selected, the quietest of the currently sounding notes will be turned off. Usually, "LAST" is selected.

Note Priority in Performance Mode

Since Performance mode is usually used to play an ensemble consisting of several patches, it is important to decide which parts take priority. Priority is specified by the Voice Reserve settings (p. 75). When a note within a patch needs to be turned off to make room for a new note, the Patch Priority setting of the patch will apply (p. 40).

Voice Reserve

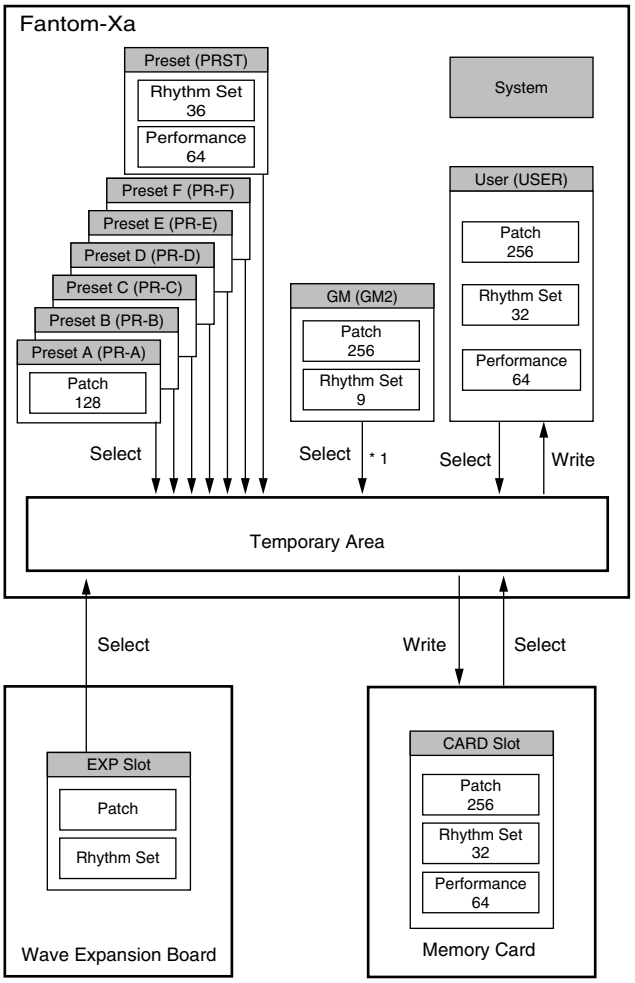
The Fantom-Xa has a Voice Reserve function that lets you reserve a minimum number of notes that will always be available for each part. For example if Voice Reserve is set to "10" for part 16, part 16 will always have 10 notes of sound-producing capacity available to it even if a total of more than 128 notes (total for all parts) are being requested. When you make Voice Reserve settings, you need to take into account the number of notes you want to play on each part as well as the number of tones used by the selected patch (p. 75).

MEMO

It is not possible to make Voice Reserve settings that would cause the total of all parts to be greater than 64 voices.

About Memory

Patch and performance settings are stored in what is referred to as memory. There are three kind of memory: temporary, rewritable, and non-rewritable.



* 1 The selected Patches/Rhythm Sets cannot be changed.

Temporary Memory

Temporary Area

This is the area that holds the data for the patch or performance that you've selected using the panel buttons.

When you play the keyboard or play back a sequence, sound is produced based on data in the temporary area. When you edit a patch or performance, you do not directly change the data in memory; rather, you call up the data into the temporary area, and edit it there.

Settings in the temporary area are temporary, and will be lost when the power is turned off or when you select another patch/performance. To keep the settings you have changed, you must write them into rewritable memory.

Rewritable Memory

System Memory

System memory stores system parameter settings that determine how the Fantom-Xa functions.

User Memory

User memory is the internal memory area that holds patches, performances, samples, and performance data.

Memory Card

You can use a memory card to store patches, performances, samples, and performance data just as you can in User memory.

Non-Rewritable Memory

Preset Memory

Data in Preset memory cannot be rewritten. However, you can call up settings from preset memory into the temporary area, modify them and then store the modified data in rewritable memory (except GM2).

Wave Expansion Board (SRX Series)

The Fantom-Xa can be equipped with a Wave Expansion Board (SRX series; sold separately). Wave Expansion Boards contain Wave data, as well as patches and rhythm sets that use this Wave data, which can be called directly into the temporary area and played.

About the Onboard Effects

Effect Types

The Fantom-Xa has built-in effect units, and you can independently edit each unit's settings.

Multi-Effects

The multi-effects are multi-purpose effects that completely change the sound type by changing the sound itself. Contained are 78 different effects types; select and use the type that suits your aims. In addition to effects types composed of simple effects such as Distortion, Flanger, and other such effects, you can also set up a wide variety of other effects, even connecting effects in series or in parallel. Furthermore, while chorus and reverb can be found among the multi-effects types, the following chorus and reverb are handled with a different system. In Performance mode, three types of multi-effect can be used simultaneously; these are referred to as MFX1, MFX2, and MFX3. In Patch mode, the Keyboard part can use MFX1 and the Pad part can use MFX2.

Chorus

Chorus adds depth and spaciousness to the sound. You can select whether to use this as a chorus effect or a delay effect.

Reverb

Reverb adds the reverberation characteristics of halls or auditoriums. Five different types are offered, so you can select and use the type that suits your purpose.

Mastering Effect

This is a stereo compressor (limiter) that is applied to the final output of the Fantom-Xa. It has independent high, mid, and low ranges. Independently for the high-frequency, mid-frequency, and low-frequency regions, this compresses any sounds that exceed the specified level, making the volume more consistent.

In Patch Mode

Multi-effects can be used individually by each patch and rhythm set.

Tempo Track

The Tempo track records tempo changes of a song over time. It can be used for tempo changes during a song. If a song has the same tempo from beginning to end, the Tempo track can be ignored.

When a song is first recorded on the Fantom-Xa, a tempo setting at the time of recording will be stored at the beginning of the Tempo track. Therefore when song playback starts from the beginning, the song will always play back at this initial tempo.

Thus playback tempo is determined by the Tempo track setting. If you modify the tempo during playback, the overall tempo of the song will be controlled by the setting you make.

Beat Track

The Beat track records the time signature of each measure of a song. Set the Beat track when recording a new song, or when you want to change time signature during a song.

Pattern

Patterns are a place to store performance data separately from phrase tracks. You can create up to one hundred patterns; as with a phrase track, each pattern can contain up to sixteen MIDI channels of data.

Patterns can be assigned to phrase tracks. This means that if your song uses repeating phrases such as drum or bass riffs, you can record each phrase as a pattern, and then use the Step Recording window to assign the patterns at the appropriate locations (p. 130). In this case, the phrase track only contains "pattern call numbers" which specify which pattern is to be played. This is convenient, and also lets you conserve memory.

The RPS function (p. 154) for immediate playback also applies to Patterns. Patterns are therefore convenient for live performance, if you've recorded necessary sequencer data as Patterns and take them to the gig.

Patterns also make fine scratch-pads for musical ideas.

Songs and the Sound Generator Mode

The Fantom-Xa's sequencer can be used at any time, regardless of the mode of the sound generator (Patch/Performance).

In Performance mode you can use up to sixteen sounds, with each part playing a different sound. This means that Performance mode is ideal for recording or playing an ensemble that uses multiple instruments, such as drums, bass, and piano.

In Patch mode you can play using the sounds that are assigned to the Keyboard part and the Pad part.

Positions for Storing a Song

Temporary Area

The sequencer has an area called **Temporary Area** that can temporarily store one song. So we call this **temporary song**.

The song in Temporary Area is volatile and will be lost when the power is turned off. To keep a song, you must save it to user memory or memory card.

Memory Card/User Memory

If you want to keep the song in Temporary Area that you recorded or edited, you must save it as a song file onto a memory card or into user memory. Either method lets you save up to 256 songs.

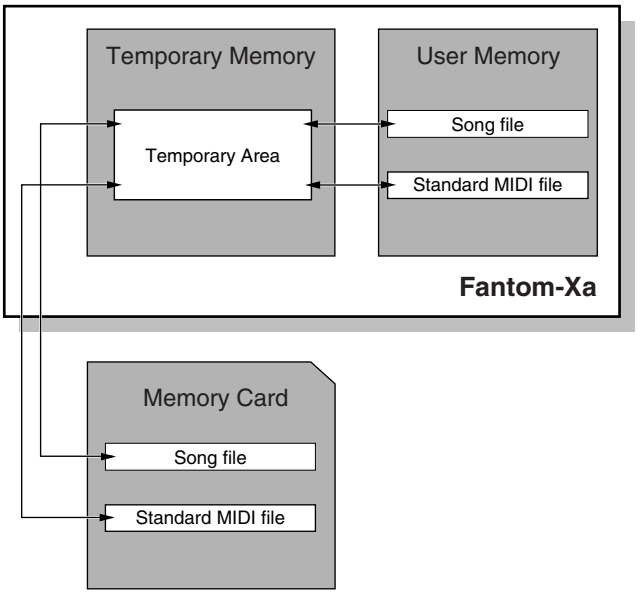
A card and user memory can contain two file types. The three-letter symbol shown in parentheses ( ) is a file name extension that distinguishes the different file types.

Song File (.SVQ)

This file is a song created on the Fantom-Xa. It is called an **MRC Pro song**.

Standard MIDI File (.MID)

Standard MIDI File is a standard file format that allows sequencer data to be exchanged between most musical applications. Fantom-Xa files can be saved as Standard MIDI Files. This also allows you to play back commercially available music data (GM scores) that is compatible with the GM/GM2 system.

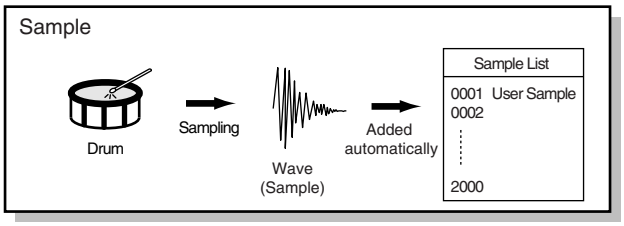


About the Sampling Section

The Sampling section samples (records) external sounds from an audio device or mic as digital data. Sampled sounds can be played as a patch or rhythm set. You can also import WAV/AIFF format files and use them in the same way.

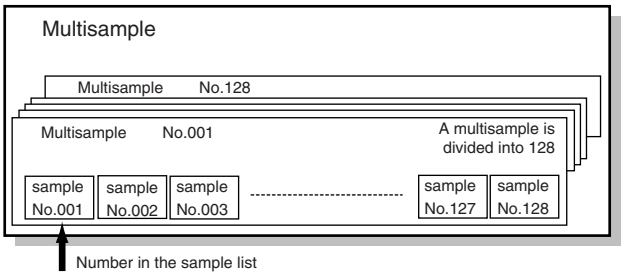
Samples

A **sample** contains the waveform data sampled by the Fantom-Xa. In addition to the actual waveform data itself, a sample also contains parameters such as start point, loop start, and loop end. The Fantom-Xa can hold 9,000 samples (User: 2000, Card: 7000).



Multisamples

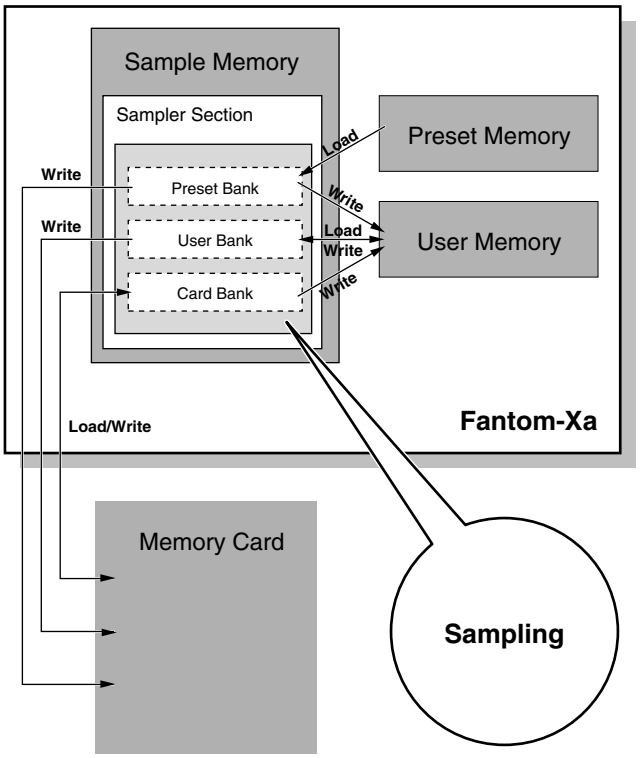
Two or more samples assigned to the keyboard are collectively called a multisample. A multisample is divided into 128 "splits." Each split contains the number of a sample in the sample list—it does not contain the actual sample data itself.



Where Samples are Stored

Samples that you record or import are stored in sample memory. This sample memory is temporary, and its data will be lost when you turn off the power. If you want to keep these samples, you must save them to user memory or a memory card.

* *You cannot save data to the preset memory.*



Basic Operation of the Fantom-Xa

Switching the Sound Generator Mode

The Fantom-Xa has two sound generating modes: Patch mode, Performance mode. You can select the sound generating mode (state) that is most appropriate for how you are playing the Fantom-Xa.

Use the following procedure to switch between these modes.

Patch Mode

In this mode you can use the keyboard and pads to play individual sounds (patches/rhythm sets).

The keyboard and pads each have their own sound generator and part, and are connected on a single MIDI channel.

To select Patch mode

1. **Press [PATCH/RHYTHM].**

Performance Mode

This mode allows you to combine multiple sounds (patches or rhythm sets).

LAYER/SPLIT screen

Use this screen when you want to play two or more sounds (patches/rhythm sets) together.

You can play patches together (Layer) or divide the keyboard into two regions and play different patches in each region (Split).

MIXER screen

Use this screen when you want to mix the sounds by adjusting the level and pan for each of the 16 parts.

MEMO

The LAYER screen and MIXER screen provide different views of the same performance. For example, you'll want to use the LAYER/SPLIT screen when you're setting up a keyboard split, or use the MIXER screen when you're adjusting the effect settings or volume balance of the patches for each part.

To select the LAYER screen

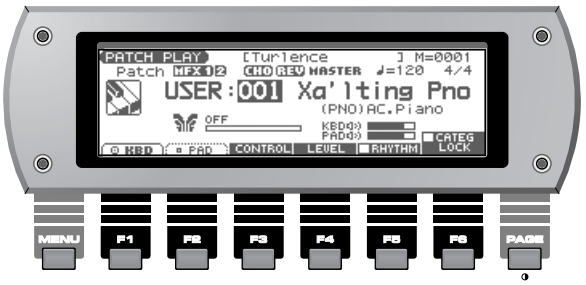
1. **Press [LAYER/SPLIT].**

To select the MIXER screen

1. **Press [MIXER].**

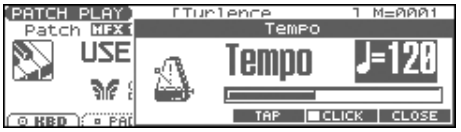
About the Function Buttons

The six [F1]–[F6] buttons (function buttons) located below the display execute various functions, and their operation will differ depending on the screen. Functions will be listed in the bottom of the screen.



Window

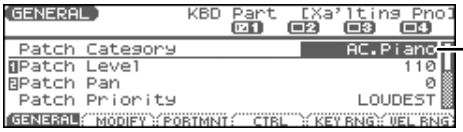
The somewhat smaller screens that appear temporarily on top of the normal screens are called windows. Various types of windows appears according to the situation. Some display lists, others allow you to make settings, and still others ask you to confirm an operation.



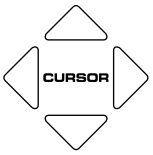
Press [EXIT] to close the window. Some windows will close automatically when an operation is performed.

Moving the Cursor

A single screen or window displays multiple parameters or items for selection. To edit the setting of a parameter, move the cursor to the value of that parameter. To select an item, move the cursor to that item. When selected with the cursor, a parameter value or other selection is highlighted.



Move the cursor with the ▲, ▼, ◀ and ▶ (cursor buttons).



▲ : moves the cursor up.

▼ : moves the cursor down.

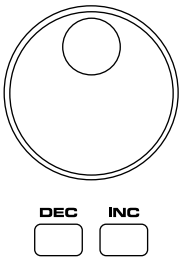
◀ : moves the cursor to the left.

▶ : moves the cursor to the right.

- If you hold down one cursor button while you also press the cursor button for the opposite direction, the cursor will move more rapidly in the direction of the first-pressed cursor button.
- When the cursor is displayed, pressing [ENTER] will sometimes display a list of the available choices for that parameter. This is convenient when you want to see what your choices are.

Changing a Value

To change the value, use the VALUE dial or the [INC] [DEC] buttons.



TIP

In each screen of the Fantom-Xa, you can use the cursor buttons to move the area displayed as highlighted, and modify its value.

* *Each parameter has its own range of possible values, so you cannot set any value smaller than the minimum value or greater than the maximum value.*

VALUE Dial

Turning the VALUE dial clockwise increases the value, counterclockwise decreases the value.

- Holding down [SHIFT] as you move the VALUE dial increases value increments so you can make large value changes faster.

[INC] and [DEC]

Pressing [INC] increases the value, and [DEC] decreases it.

- Keep the button pressed for continuous adjustment.
- For faster value increases, keep [INC] pressed down and press [DEC]. For decreasing value faster, keep [DEC] pressed down and press [INC].
- If you press [INC] or [DEC] while holding down [SHIFT], the value increments will get bigger.

When the cursor is located at a parameter value, press [ENTER] to display a window where you can set the value. Use ▲ ▼ to select a value, and then press [ENTER] to finalize the setting.

Using the pads

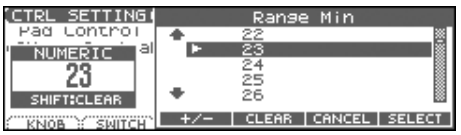
In some cases when the cursor is located at an input location, you can press [ENTER] to see a list of parameter values. For some of these lists, you can use the pads to input or specify the value.

1. **Press [TRIGGER] and [CATEGORY] simultaneously so both buttons are lit.**
   You can use the pads to input or specify the value.

When inputting a numerical value

PAD [0]–[9]: Input numerals 0–9

[SHIFT]: Cancels the numeral you input



When inputting directly

Pressing a pad will directly input the corresponding value. From the top, the items in the list correspond to pads [0]–[9].

Assigning a Name

On the Fantom-Xa, you can assign names to each patch, rhythm set, performance, Song, Sample, and Pattern. The procedure is the same for any type of data.

1. Press ◀ ▶ to move the cursor to the location where you wish to input a character.

2. Turn the VALUE dial, or press [INC] [DEC] to specify the character.

- [F2 (TYPE)]: Selects the type of character. Each time you press this, you will alternately select the first character of a character set: uppercase (A), lowercase (a), or numerals and symbols (0).
- [F3 (DELETE)]: Deletes the character at the cursor location.
- [F4 (INSERT)]: Inserts a space at the cursor location.
- ◀ or ▶: Move the cursor.
- ▲, ▼: Switch between uppercase and lowercase letters.

* *If you decide to discard your input, press [F5 (CANCEL)].*

Available Characters/Symbols

space, A–Z, a–z, 0–9, ! " # $ % & ` ( ) * + , - . / : ; < = > ? @ [ \ ] ^ _ ` { | }

TIP

From a naming screen you can press [MENU] and select "1. Undo" to return the name to what it was before you changed it. From [MENU] you can select "2. To Upper" or press ▲ to change the character at the cursor to uppercase. From [MENU] you can select "3. To Lower" or press ▼ to change the character at the cursor to lowercase. From [MENU] you can select "4. Delete All" to clear all the characters you were inputting.

NOTE

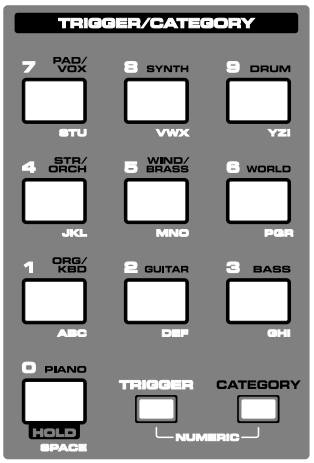
Song file names may not contain lowercase characters or certain symbols (" * + , . / : ; < = > ? [\ ] |).

Using the Pads to Specify Characters

You can use the pads to specify characters.

By pressing a pad one or more times, you can successively select the letters, numerals, and symbols that appear on the pad. For example, if you repeatedly press pad 1, you will cycle through the available choices like this: 1 → A → B → C → 1 → A...

- You can switch between uppercase and lowercase letters for the character to be entered by pressing [F1 (CAPS LOCK)] to add a check mark (✔).
- Press PAD [0] (SPACE) to replace the character at the cursor location with a space.



Playing in Patch Mode

In Patch mode, the keyboard and the pads are each used to play a single sound (patch/rhythm set).

The keyboard controller section and the pad controller section each have their own sound generator part, and each are connected by their own MIDI channel. This means you can play separate sounds on the keyboard and the pads.

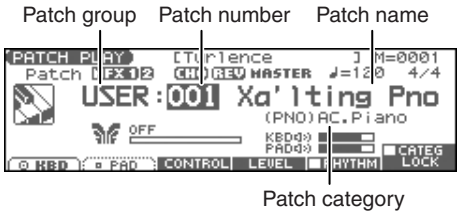
About the PATCH PLAY Screen

Press [PATCH/RHYTHM]. You will enter Patch mode, and the PATCH PLAY screen appears.

Keyboard Part and Pad Part

The Fantom-Xa has two parts; a Keyboard part and a Pad part.

- Press [F1 (KBD)] to select the Keyboard part.

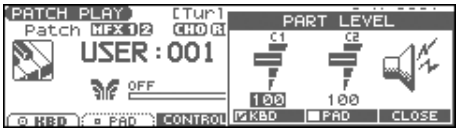


- Press [F2 (PAD)] to select the Pad part.

- Press [PAGE] to switch the PATCH PLAY screen.
  This screen simultaneously displays the settings of the Keyboard part and the Pad part.

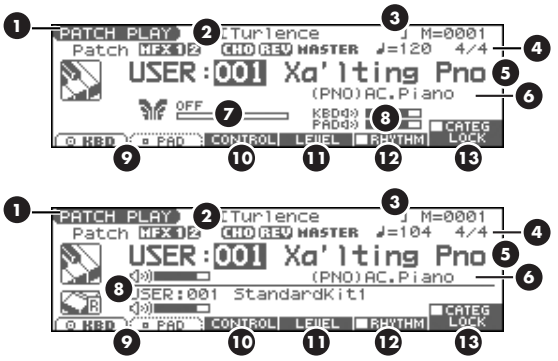
Adjust the Volume of the Keyboard Part and Pad Part

1. **In the PATCH PLAY screen, press [F4 (LEVEL)].**
   The PART LEVEL window appears.



2. **Press [F4 (KBD)] or [F5 (PAD)] to select the part.**
3. **Use the VALUE dial or [INC] [DEC] to adjust the volume.**
4. **Press [F6 (CLOSE)] to close the window.**

Functions in the PATCH PLAY screen



1. Indicates the current sound generating mode.
2. Indicates multi-effects (MFX1, 2), chorus (CHO), reverb (REV), and masterring (MASTER) on and off.
3. Indicates the name of the currently selected song, the measure location.
4. Indicates the time signature, and the tempo.
5. Indicates/selects the group, number, and name of the selected patch.
6. Indicates/selects the patch category.
7. This indicates the function that is assigned to the D Beam, and the response status of the D Beam.
8. Indicates the volume of the Keyboard part and Pad part.
9. Switches the keyboard part and pad part.
10. Displays the Control Setting screen.
11. Adjusts the volume of the keyboard part and pad part.
12. Determines whether you will be selecting patches or rhythm sets.
13. Selects whether the patch category will be locked.

Patch/Rhythm Set Group

The Fantom-Xa has several patch groups, including the User group and Preset groups A–F and GM, with each group storing 128 patches (256 in GM, USER). What's more, you can further expand your options by installing an optional Wave Expansion Board (SRX series; sold separately), enabling you to select from a huge assortment of available patches.

USER

This is the group inside the Fantom-Xa which can be rewritten. Patches you yourself create can be stored in this group. The Fantom-Xa includes 256 preset patches and 32 rhythm sets.

PR-A–F (Preset A–F), PRST (Preset)

This is the group inside the Fantom-Xa which cannot be rewritten. However you may modify the settings of the currently selected patch, and then store the modified patch in User memory. Groups A–F already contain 128 prepared patches each, for a total of 768 patches.

GM (General MIDI 2)

This is an internal group of patches compatible with General MIDI 2, a system of MIDI function specifications designed to transcend differences between makers and types of devices; these patches cannot be overwritten. Furthermore, settings of currently selected patches from this group cannot be changed. The Fantom-Xa includes 256 preset patches.

CARD (Memory Card)

This group lets you use patches stored on a memory card inserted in the rear panel card slot. Since the data in this group can be rewritten, you can use this group to store patches that you create.

EXP (Wave Expansion Board installed in EXP Slot)

These are groups used when using patches from Wave Expansion Board installed in the EXP slot, and cannot be rewritten. However you may modify the settings of the currently selected patch, and then store the modified patch in User memory and Memory card. The number of onboard patches depends on the specific Wave Expansion Board installed.

* *EXP patches can be selected only if a Wave Expansion Board (SRX series; sold separately) is installed in the slot.*

Selecting a Patch

1. **Press [PATCH/RHYTHM] to access the PATCH PLAY screen.**
2. **Press [F1 (KBD)] or [F2 (PAD)] to select the Keyboard part or Pad part.**

* *To select a rhythm set, press [F5 (RHYTHM)] to add a check mark (✔).*

3. **If you select a patch group (or a rhythm set group), press ◀ and use the VALUE dial or [INC] [DEC] to select.**

4. **Press ◀ ▶ to move the cursor to the patch number.**
5. **Use the VALUE dial or [INC] [DEC] to select a patch (or a rhythm set).**
   If you selected a patch (or a rhythm set) for the keyboard part, play the keyboard to hear the sound. If you selected a patch (or a rhythm set) for the pad part, play the pads to hear the sound.

Selecting Patches from the List

You can display a list of patches and select a patch from that list.

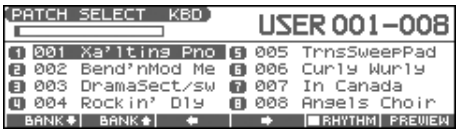
1. **Press [PATCH/RHYTHM] to access the PATCH PLAY screen.**
2. **Press [ENTER].**
   The PATCH LIST screen appears.

3. **To select a patch, press [F3 (PATCH)].**
   To select a rhythm set, press [F4 (RHYTHM)].
   If you press [F4 (RHYTHM)], the RHYTHM LIST screen appears.
4. **Press ◀ ▶ to select a group.**
5. **Use the VALUE dial, [INC] [DEC], or ▲ ▼ to select a patch/rhythm set.**
6. **Press [ENTER] to confirm your selection.**

Using the PATCH SELECT Screen

1. **Press [PATCH/RHYTHM] to access the PATCH PLA screen.**

2. **Press [PATCH SELECT].**
   The PATCH SELECT screen appears.



3. **To select a rhythm set, press [F5 (RHYTHM)] t mark (✔).**
   If you add a mark, the RHYTHM SELECT screen

4. **Press [F1] or [F2] to select a group.**

5. **Use [F3], [F4], PART/TRACK [1]–[8], [INC] [D or the VALUE dial to select a patch/rhythm**

6. **Press [ENTER] to return to the PATCH PL**

Auditioning Patches/Rhy (Phrase Preview)

The Fantom-Xa allows you to preview patches appropriate for each type of patch.

1. **Press [PATCH/RHYTHM] to access th screen.**

2. **Press [ENTER] to access the PATC**

3. **Press and hold [F5 (PREVIEW)].**
   The patch selected in the PATCH LI

4. **Release your finger from [F5 (PR will stop playing.**

* *If you wish to change how the phrase can edit the Preview Mode paramet*

o select the Bank.

], [INC] [DEC], or ▲ ▼ to .

)] to execute the registration.

1)] to return to the PATCH LIST screen.

a patch registration

g [F2 (REMOVE)] you can cancel the patch (or rhythm set) tion that is selected in the FAVORITE PATCH screen.

Choosing the Favorite Patch/ Rhythm Set

1. **Press [PATCH/RHYTHM] to access the PATCH PLAY screen.**

2. **Press [ENTER] to access the PATCH LIST screen.**

3. **Press [F1 (FAVORIT)].**
   The FAVORITE PATCH screen appears.

4. **To change the Bank, use the VALUE dial or ◀ ▶.**

5. **Press PART/TRACK [1]–[8], [INC] [DEC], or ▲ ▼ to select the patch.**

6. **Press [F6 (SELECT)] or [ENTER] to confirm your selection.**

Selecting Patches by Category

The Fantom-Xa allows you to specify a type (category) of patch so that you can quickly find the desired patch. There are a total of 38 categories.

1. **Press [PATCH/RHYTHM] to access the PATCH PLAY screen.**
2. **Press [F1 (KBD)] or [F2 (PAD)] to select the Keyboard part or Pad part.**

* *If a check mark (✔) is displayed above [F5 (RHYTHM)], press [F5 (RHYTHM)] to remove the mark.*

3. **Press ▶ to move the cursor to the "Patch Category," and use the VALUE dial or [INC] [DEC] to select the desired category.**
4. **Press [F6 (CATEG LOCK)] to add a check mark (✔).**

5. **Use [CURSOR] to move the cursor to the patch group or patch number, and use the VALUE dial or [INC] [DEC] to select the patch.**

Selecting from the List

1. **Press [PATCH/RHYTHM] to access the PATCH PLAY screen.**
2. **Press [ENTER].**
   The PATCH LIST screen appears.
3. **Press [F2 (CATEG)].**
   The CATEGORY screen appears.

4. **Use PAD [0]–[9] to select the category group.**
5. **Press ◀ ▶ to select the desired category.**
6. **Use the VALUE dial, [INC] [DEC], or ▲ ▼ to select a patch.**
7. **Press [F6 (SELECT)] or [ENTER] to confirm your selection.**

TIP

From the PATCH PLAY screen, you can access the CATEGORY screen by pressing [CATEGORY].

The following categories can be selected.

Category		Contents	Group [PAD]
- - -	No Assign	No assign	—
PNO	AC.Piano	Acoustic Piano	PIANO [0]
EP	EL.Piano	Electric Piano	
KEY	Keyboards	Other Keyboards (Clav, Harpsichord etc.)	ORG/ KBD [1]
BEL	Bell	Bell, Bell Pad	
MLT	Mallet	Mallet	
ORG	Organ	Electric and Church Organ	
ACD	Accordion	Accordion	
HRM	Harmonica	Harmonica, Blues Harp	
AGT	AC.Guitar	Acoustic Guitar	GUITAR [2]
EGT	EL.Guitar	Electric Guitar	
DGT	Dist.Guitar	Distortion Guitar	
BS	Bass	Acoustic & Electric Bass	BASS [3]
SBS	Synth Bass	Synth Bass	
STR	Strings	Strings	STR/ ORCH [4]
ORC	Orchestra	Orchestra Ensemble	
HIT	Hit&Stab	Orchestra Hit, Hit	
WND	Wind	Winds (Oboe, Clarinet etc.)	WIND/ BRASS [5]
FLT	Flute	Flute, Piccolo	
BRS	AC.Brass	Acoustic Brass	
SBR	Synth Brass	Synth Brass	
SAX	Sax	Sax	
PLK	Plucked	Plucked (Harp etc.)	WORLD [6]
ETH	Ethnic	Other Ethnic	
FRT	Fretted	Fretted Inst (Mandolin etc.)	
BPD	Bright Pad	Bright Pad Synth	PAD/ VOX [7]
SPD	Soft Pad	Soft Pad Synth	
VOX	Vox	Vox, Choir	
HLD	Hard Lead	Hard Synth Lead	SYNTH [8]
SLD	Soft Lead	Soft Synth Lead	
TEK	Techno Synth	Techno Synth	
PLS	Pulsating	Pulsating Synth	
FX	Synth FX	Synth FX (Noise etc.)	
SYN	Other Synth	Poly Synth	
PRC	Percussion	Percussion	DRUM [9]
SFX	Sound FX	Sound FX	
BTS	Beat&Groove	Beat and Groove	
DRM	Drums	Drum Set	
CMB	Combination	Other patches which use Split and Layer	

Transposing the Keyboard in Octave Units (Octave Shift)

The Octave Shift function transposes the pitch of the keyboard in 1 octave units (-3– +3 octaves).

For playing a bass part more easily using your right hand, transpose the keyboard down by 1 or 2 octaves.

* *Octave Shift applies only to the keyboard part.*

1. In the PATCH PLAY screen, press OCTAVE [-] or [+] to set the amount of transposition (-3– +3).

The button will light if this is set.

- Each time you press OCTAVE [+], the amount of transposition will change in the order of +1, +2, and +3. Each time you press OCTAVE [-], the amount of transposition will change in the order of -1, -2, and -3.
- If you press both buttons simultaneously, the amount of movement will be zero.

NOTE

There is a single Octave Shift setting (Setup parameter) for the entire Fantom-Xa. The changed setting will be remembered even if you switch patches or performances.

Transposing the Keyboard in Semitone Steps (Transpose)

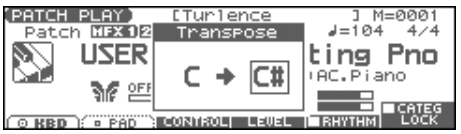
Transpose changes keyboard pitch in units of semitones.

This function is useful when you play transposed instruments such as trumpet or clarinet following a printed score.

* *Transpose applies only to the keyboard part.*

1. In the PATCH PLAY screen, hold down [SHIFT] and press OCTAVE [-] or [+] to adjust the Transpose setting (G–F#: -5– +6 semitones).

- If you hold down [SHIFT] and press both buttons simultaneously, the amount of movement will be zero.



NOTE

There is a single Transpose setting (Setup parameter) for the entire Fantom-Xa. The changed setting will be remembered even if you switch patches or performances.

Selecting the Tones That Will Sound (Tone On/Off)

Since a patch is a combination of up to four tones, you can switch unwanted (tones out of the four) off and get just the sound of a specific tone.

- In the PATCH PLAY screen, press TONE SW [1]–[4] (PART/TRACK [1]–[4]) to turn each tone on/off.

* *If you want just one or two tones to sound in a patch, turn the others off and store that setting on a patch. This cuts nonessential use of the Fantom-Xa's simultaneous voices.*

Playing Single Notes (Monophonic)

When using a patch for a naturally monophonic instrument such as sax or flute, it is effective to play in mono.

1. **From the PATCH PLAY screen, press [PATCH EDIT].**
2. **Press [F1 (COMMON)] and then press [F4 (CTRL)].**
3. **Press ▲ ▼ to move the cursor to "Mono/Poly."**
4. **Use the VALUE dial or [INC] [DEC] to select "MONO."**
   Now you can play in mono mode.

   TIP

   If you assign "Mono/Poly" as a function to be controlled by the assignable switches ([1]/[2]), you can easily switch between mono/poly by pressing a button (p. 84).

Creating Smooth Pitch Changes (Portamento)

Portamento is an effect which smoothly changes the pitch from the first-played key to the next-played key. By applying portamento when Mono mode is selected (see the preceding item), you can simulate performance effects such as slurring on a violin.

1. **From the PATCH PLAY screen, press [PATCH EDIT].**
2. **Press [F1 (COMMON)] and press [F3 (PORTMNT)].**
3. **Press ▲ ▼ to move the cursor to "Portamento Switch."**
4. **Use the VALUE dial or [INC] [DEC] to select "ON."**
   You're ready to play portamento.

   TIP

   If you assign "Portamento Switch" as a function to be controlled by the assignable switches ([1]/[2]), you can use a button to easily turn portamento on/off (p. 84).

Playing Percussion Instruments

In Patch mode, you can play percussion instruments from the keyboard and pad by selecting a rhythm set. As the rhythm tone assigned to each key and pad varies by the rhythm set selected, you can play a wide range of percussion instruments.

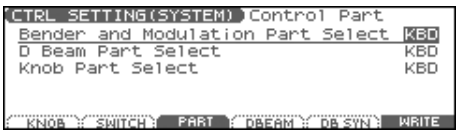
Selecting the Parameter Controlled by the Realtime Controllers or D Beam Controller (Control Setting)

The Fantom-Xa lets you assign the parameters that will be affected when you operate the realtime control knobs, assignable switches, D Beam, pitch bend, or modulation lever. This lets you modify the sound in a variety of ways by operating the controllers.

Specifying the Part that Will be Affected by the Controller

You can specify whether operating the controller will affect the sound assigned to the keyboard part or the sound assigned to the pad part.

1. **From the PATCH PLAY screen, press [F3 (CONTROL)] and press [F3 (PART)].**
   The CONTROL SETTING screen appears.



2. **Press ▲ ▼ to select the parameter.**
3. **Use the VALUE dial or [INC] [DEC] to select the part.**
4. **If you want to keep the settings, press [F6 (WRITE)].**

   * *When Patch mode is selected, controller settings cannot be saved for each individual patch. Controller settings are saved as system settings.*
5. **Press [EXIT] to return to the PATCH PLAY screen.**

Parameter	Value	Explanation
Bender and Modulation Part Select	KBD, PAD	Part controlled by pitch bend messages or modulation messages
D Beam Part Select		Part controlled by the D Beam
Knob Part Select		Part controlled by the realtime control knobs

cf.

For details on assigning a parameter to a controller, refer to **Modifying the Sound in Real Time** (p. 80).

Creating a Patch

With the Fantom-Xa, you have total control over a wide variety of settings. Each item that can be set is known as a **parameter**. When you change the values of parameters, you are doing what is referred to as **Editing**. This chapter explains the procedures used in creating patches, and the functions of the patch parameters.

Four Tips for Editing Patches

Select a patch that is similar to the sound you wish to create (p. 30)

It's hard to create a new sound that's exactly what you want if you just select a patch and modify its parameters at random. It makes sense to start with a patch whose sound is related to what you have in mind.

Decide which tones will sound (p. 33)

Since a patch is a combination of up to any four tones, you should listen to how the individual tones sound before you edit. Then decide which tones you are going to use. It is important to turn off unused tones to avoid wasting voices, unnecessarily reducing the number of simultaneous notes you can play.

Check the Structure setting (p. 38)

The important Structure parameter determines how the four tones combine. Before you select new tones, make sure you understand how the currently selected tones are affecting each other.

Turn Effects off (p. 157)

Since you will hear the original sound of the patch itself when the effects are turned off, the results of your modifications will be easier to hear. Actually, sometimes just changing effects settings can give you the sound you want.

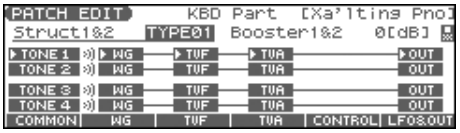
How to Make Patch Settings

1. Press [PATCH/RHYTHM] to access the PATCH PLAY screen.

2. Select the part (keyboard or pad) and patch whose settings you want to edit (p. 30).

* *You cannot edit the patches in the GM2 group.*

3. Press [PATCH EDIT] to access the PATCH EDIT screen.



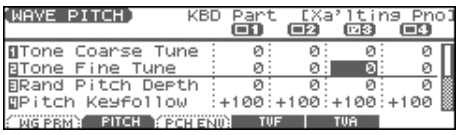
* *Set the Structure Type (p. 38) and Booster Gain (p. 39) parameters in this screen.*

4. Press [F1 (COMMON)]–[F6 (LFO&OUT)] to select the parameter group.

5. Press [F1]–[F6], and then press ▲ ▼ to select the parameter.

Some parameters can be set independently for each tone.

To select the tone you want to edit, press TONE SELECT [1]–[4] (PART/TRACK [5]–[8]) or ◀ ▶.



6. Use the VALUE dial or [INC] [DEC] to change the value.

7. Repeat steps 4–6 to set each parameter.

8. Press [WRITE] to save the changes you've made (p. 37). If you do not wish to save changes, press [EXIT] to return to the PATCH PLAY screen.

If you return to the PATCH PLAY screen without saving, an "*" will be displayed at the left of the patch group.

NOTE

If you turn off the power or select a different sound while the display indicates "*," your edited patch will be lost.

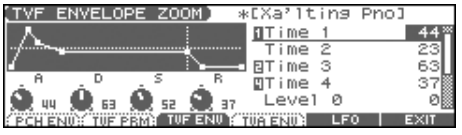
Editing in a Graphic Display (Zoom Edit)

You can edit while viewing a graphic display of the most frequently used important parameters. Zoom Edit lets you edit the following parameters.

Parameter	page	Parameter	page
Pitch Envelope	p. 44	TVA Envelope	p. 48
TVF	p. 45	LFO 1/2	p. 52
TVF Envelope	p. 46	Step LFO	p. 54

1. With the screen for editing the above parameters shown, press [F6 (ZOOM)].

The Zoom Edit screen will appear.



2. Press [F1]–[F5] to select the parameter group.

3. Press [CURSOR] to select the parameter.

4. Use the VALUE dial or [INC] [DEC] to change the value.

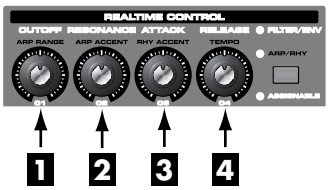
You can use the REALTIME CONTROL knobs to set the value.

5. When you have finished editing, press [F6 (EXIT)].

Using the REALTIME CONTROL Knobs to Change the Value

If a number is displayed for the parameter name (1 , 2 , 3 , 4), you can use the REALTIME CONTROL knobs (C1–C4) to set the value.

If you press the button located at the right of the REALTIME CONTROL knobs to make the indicator light, the knobs will control their original functions.



You can use the same knobs to edit the values in the Zoom Edit screen (p. 35) as well.

Initializing Patch Settings

"Initialize" means to return the settings of the currently selected sound to a standard set of values.

* *The Initialize operation will affect only the currently selected sound; the sounds that are stored in user memory will not be affected. If you wish to restore all of the Fantom-Xa's settings to their factory values, perform a Factory Reset (p. 203).*

1. **Press [PATCH/RHYTHM] to access the PATCH PLAY screen.**
2. **Select the part (keyboard or pad) and patch that you want to initialize (p. 30).**
3. **Press [PATCH EDIT] to access the PATCH EDIT screen.**
4. **Hold down [SHIFT] and press [F5 (INIT)].**
   A message will ask you for confirmation.
5. **Press [F6 (EXEC)].**
   The initialization will be carried out.

* *To cancel, press [F5 (CANCEL)].*

Copying Patch (Tone) Settings

This operation copies the settings of any desired patch to the currently selected patch.

1. **Press [PATCH/RHYTHM] to access the PATCH PLAY screen.**
2. **Select the part (keyboard or pad) and the copy-destination patch (p. 30).**
3. **Press [PATCH EDIT] to access the PATCH EDIT screen.**
4. **Hold down [SHIFT] and press [F6 (TONE CPY)].**
   The Patch Tone Copy window appears.

5. **Press [CURSOR] to move the cursor, and use the VALUE dial or [INC] [DEC] to select the "Source (copy-source)" group and number, and the tone.**

* *By pressing [F4 (COMPR)] to add a check mark (✔), you can check the copy-source patch (Compare function).*

6. **Press [CURSOR] to move the cursor, and select the "Destination (copy-destination)" tone.**
7. **Press [F6 (EXEC)].**
   A message will ask you for confirmation.
8. **Press [F6 (EXEC)] to execute the copy operation.**

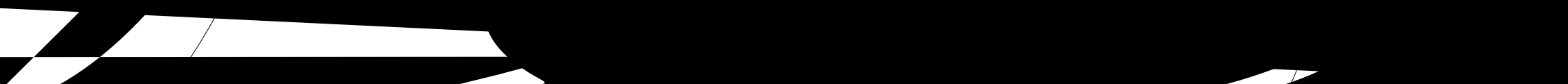
* *To cancel, press [F5 (CANCEL)].*

The Compare Function

For the Patch Tone Copy and Patch Save operations, you can use the Compare function.

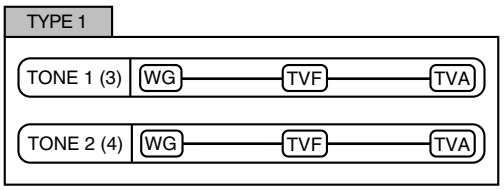
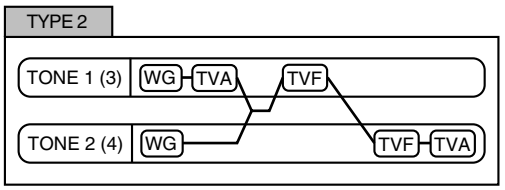
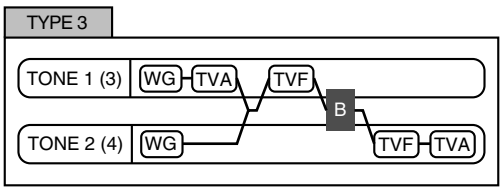
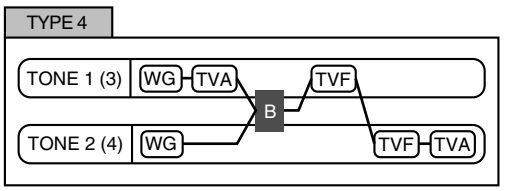
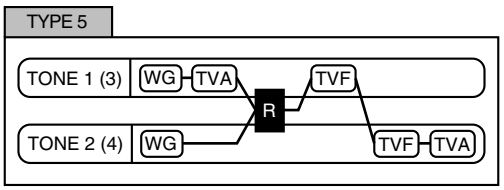
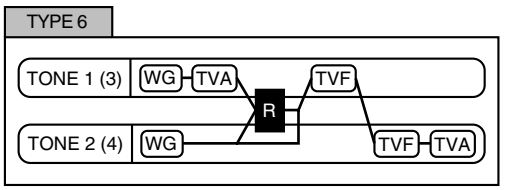
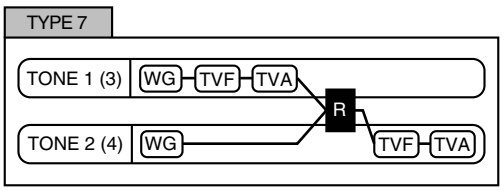
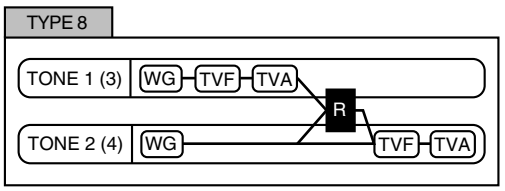
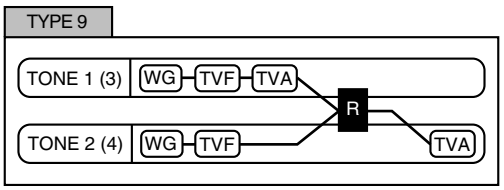
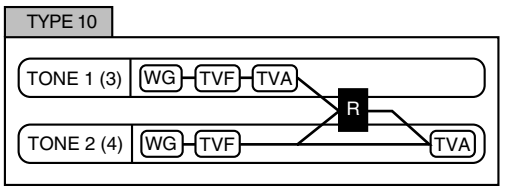
If you want to play the copy-source or write-destination patch, press [F4 (COMPR)] to add a check mark (✔). Now you can play the copy-source or write-destination patch from the keyboard or pads.

* *The patch auditioned using the Compare function may sound slightly different than when it is played normally.*



Functions of Patch Parameters

Changing How a Tone Is Sounded (Structure)

Parameter	Value	Explanation
Struct 1 & 2, 3 & 4 (Structure Type)	TYPE 01–TYPE 10	Determines how tone 1 and 2, or tone 3 and 4 are connected. The following 10 different Types of combination are available.
 With this type, tones 1 and 2 (or 3 and 4) are independent. Use this type when you want to preserve PCM sounds or create and combine sounds for each tone.		 This type stacks the two filters together to intensify the characteristics of the filters. The TVA for tone 1 (or 3) controls the volume balance between the two tones.
 This type mixes the sound of tone 1 (3) and tone 2 (4), applies a filter, and then applies a booster to distort the waveform.		 This type applies a booster to distort the waveform, and then combines the two filters. The TVA for tone 1 (or 3) controls the volume balance between the two tones and adjusts booster level.
 This type uses a ring modulator to create new overtones, and combines the two filters. The tone 1 (3) TVA will control the volume balance of the two tones, adjusting the depth of ring modulator.		 This type uses a ring modulator to create new overtones, and in addition mixes in the sound of tone 2 (4) and stacks the two filters. Since the ring-modulated sound can be mixed with tone 2 (4), tone 1 (3) TVA can adjust the amount of the ring-modulated sound.
 This type applies a filter to tone 1 (3) and ring-modulates it with tone 2 (4) to create new overtones.		 This type sends the filtered tone 1 (3) and tone 2 (4) through a ring modulator, and then mixes in the sound of tone 2 (4) and applies a filter to the result.
 This type passes the filtered sound of each tone through a ring modulator to create new overtones. The tone 1 (3) TVA will control the volume balance of the two tones, adjusting the depth of ring modulator.		 This type passes the filtered sound of each tone through a ring modulator to create new overtones, and also mixes in the sound of tone 2 (4). Since the ring-modulated sound can be mixed with tone 2 (4), tone 1 (3) TVA can adjust the amount of the ring-modulated sound.

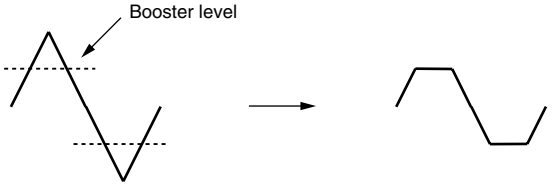
* *When TYPE 2–10 is selected and one tone of a pair is turned off, the other tone will be sounded as TYPE 1 regardless of the displayed setting.*

* *If you limit the keyboard area in which a tone will sound (Keyboard Range, p. 42) or limit the range of velocities for which it will sound (Velocity Range, p. 42), the result in areas or ranges where the tone does not sound is just as if the tone had been turned off. This means that if TYPE 2–10 is selected and you create a keyboard area or velocity range in which one tone of a pair does not sound, notes played in that area or range will be sounded by the other tone as TYPE 1 regardless of the displayed setting.*

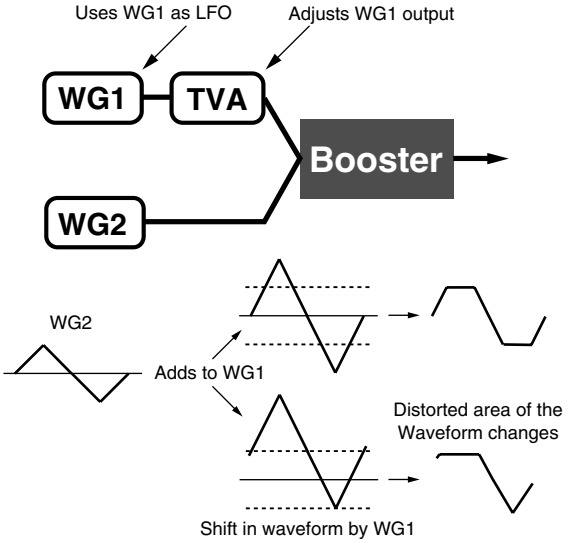
Parameter	Value	Explanation
Booster 1&2, 3&4 (Booster Gain)	0, +6, +12, +18	When a Structure Type of TYPE 3 or TYPE 4 is selected, you can adjust the depth of the booster. The booster increases the input signal in order to distort the sound. This creates the distortion effect frequently used with electric guitars. Higher settings will produce more distortion.

Booster

The Booster is used to distort the incoming signal.

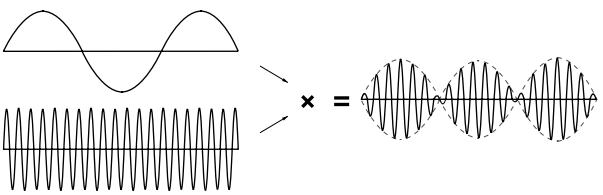


In addition to using this to create distortion, you can use the waveform (WG1) of one of the tones as an LFO which shifts the other waveform (WG2) upward or downward to create modulation similar to PWM (pulse width modulation). This parameter works best when you use it in conjunction with the Wave Gain parameter (p. 43).



Ring Modulator

A ring modulator multiplies the waveforms of two tones with each other, generating many new overtones (in harmonic partials) which were not present in either waveform. (Unless one of the waveforms is a sine wave, evenly-spaced frequency components will not usually be generated.)
As the pitch difference between the two waveforms changes the harmonic structure, the result will be an unpitched metallic sound. This function is suitable for creating metallic sounds such as bells.



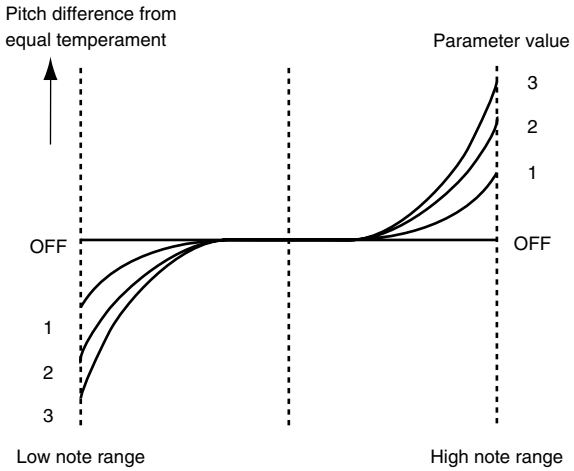
Parameter Group [F1 (COMMON)] Settings Common to the Entire Patch

[F1 (GENERAL)]

Parameter marked with a "★" can be controlled using specified MIDI messages (Matrix Control, p. 49)

Parameter	Value	Description
Patch Category	Refer to p. 32.	Type (category) of the patch
Patch Level	0–127	Volume of the patch
Patch Pan	L64–0–63R	Left/right position of the patch
Patch Priority	LAST, LOUDEST	How notes will be managed when the maximum polyphony is exceeded (128 voices) **LAST:** The last-played voices will be given priority (Notes will be turned off in order, beginning with the first-played note.) **LOUDEST:** The loudest voices will be given priority (Notes will be turned off, beginning with the lowest-volume voice.)
Octave Shift	-3– +3	Pitch of the patch's sound (in units of an octave)
Patch Coarse Tune ★	-48– +48	Pitch of the patch's sound (in semitones, +/- 4 octaves)
Patch Fine Tune	-50– +50	Pitch of the patch's sound (in 1-cent steps; one cent is 1/100th of a semitone)
Stretch Tune Depth	OFF, 1–3	Stretched tuning (a system by which acoustic pianos are normally tuned, causing the lower range to be lower and the higher range to be higher than the mathematical tuning ratios would otherwise dictate) **OFF:** Equal temperament **1–3:** Higher settings will produce the greater difference in the pitch of the low and high ranges.
Analog Feel	0–127	Depth of 1/f modulation (a pleasant and naturally-occurring ratio of modulation that occurs in a babbling brook or rustling wind) * *You can simulate the natural instability characteristic of an analog synthesizer by adding this "1/f modulation."*

Stretched Tuning



[F2 (MODIFY)]

These values are added to the parameter values of each tone.

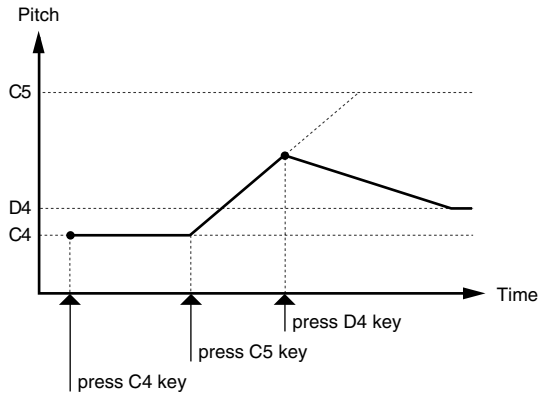
Parameter	Value	Description
Cutoff Offset	-63– +63	Cutoff Frequency (p. 45)
Resonance Offset	-63– +63	Resonance (p. 45)
Attack Time Offset	-63– +63	F-Env Time 1, A-Env Time 1 (p. 46, p. 48)
Release Time Offset	-63– +63	F-Env Time 4, A-Env Time 4 (p. 46, p. 48)
Velocity Sens Offset	-63– +63	Cutoff V-Sens, Level V-Sens (p. 46, p. 47)

[F3 (PORTMNT)]

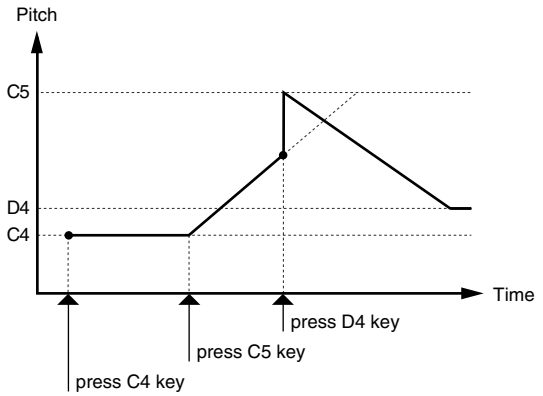
Portamento is an effect which smoothly changes the pitch from the first-played key to the next-played key.

Parameter	Value	Explanation
Portamento Switch	OFF, ON	Specifies whether the portamento effect will be applied (ON) or not (OFF).
Portamento Mode	NORMAL, LEGATO	**NORMAL:** Portamento will always be applied. **LEGATO:** Portamento will be applied only when you play legato.
Portamento Type	RATE, TIME	**RATE:** The time it takes will depend on the distance between the two pitches. **TIME:** The time it takes will be constant, regardless of how far apart in pitch the notes are.
Portamento Start	PITCH, NOTE	**PITCH:** Starts a new portamento when another key is pressed while the pitch is changing. **NOTE:** Portamento will begin anew from the pitch where the current change would end.
Portamento Time	0–127	Specifies the time over which the pitch will change.

Portamento Start: PITCH



Portamento Start: NOTE

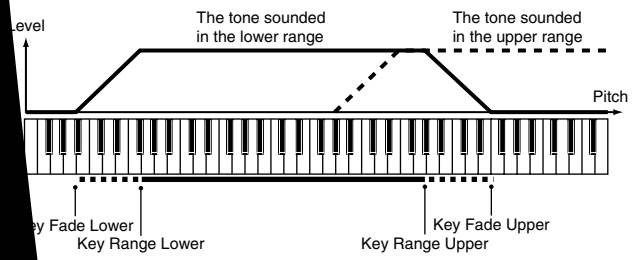


[F4 (CTRL)]

Parameter	Value	Explanation
Mono/Poly	MONO, POLY	**MONO:** Only the last-played note will sound. This setting is effective when playing a solo instrument patch such as sax or flute. **POLY:** Two or more notes can be played simultaneously.
Legato Switch	OFF, ON	**ON:** Pressing a key while continuing to press a previous key causes the note to change pitch to the pitch of the most recently pressed key, sounding all the while. This is effective when you wish to simulate the hammering-on and pulling-off techniques used by a guitarist. * *Legato Switch is valid when the Mono/Poly parameter is set to "MONO."*
Legato Retrigger	OFF, ON	**OFF:** When one key is held down and another key is then pressed, only the pitch changes, without the attack of the latter key being played. Set this to "OFF" when performing wind and string phrases or when using modulation with the mono synth keyboard sound. **ON:** Normally you will leave this parameter "ON." * *Legato Retrigger is valid when the Mono/Poly is set to "MONO" and the Legato Switch is set to "ON."*
Pitch Bend Range Up	0– +48	Degree of pitch change in semitones when the Pitch Bend lever is all the way right
Pitch Bend Range Down	-48–0	Degree of pitch change in semitones when the Pitch Bend lever is all the way left

5 (KEY RNG)] (TMT KEY RANGE)

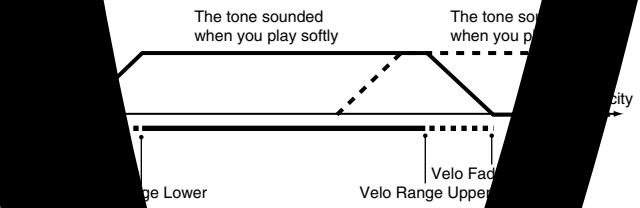
can use the note number to control the way each Tone is played.



eter	Value	Explanation
de Lower	0–127	Determines what will happe ne's level ote that's lower than Key Range Lower is played. If you don't want the ton at all, set t eter to "0."
ge Lower	C - –(Upper)	Specifies the lowest note th will sound tone.
ge Upper	(Lower)–G9	Specifies the highest note t he will soun tone.
Upper	0–127	Determines what will hap tone's level ote that's higher than Key R s played. If you don't want the t nd at all, set t eter to "0."

L RNG)] (TMT VELO RANGE

e force with which keys are played to control th Tone is played.



Par	Value	Explanation
Ton Con	OFF, ON, RANDOM, CYCLE	Determines different ton ON FF) depending on the force with which the key is play y). **RANDO** tch's co s will so mly, regardless of any Velocity messages. **CYCL** ch's co s will sound ively, regardless of any Velocity
Contr	FF, ON	Use the ntrol ble (ON), or di F) sounding of diff
Velo F	127	Determ t wi he tone's level wh he is p Rang If e to sound at all, s
Velo Ra	per)	Sp city at whic
Velo Ra	–127	S elocit d.
Velo Fade		when the tone is played at a velocity greater than Velo all, set this parameter to "0."

MEMO

When usi rix , set the lowest value (Lower) and highest value (Upper) of the value of the MIDI mess

NOTE

Inst n also have tones substituted using the Matrix Control (p. 49). However, the keyboard velocity and the simultaneously to make different tones to sound. When using the Matrix Control to switch tones, set the Tone to "OFF."

Parameter Group [F2 (WG)]
Modifying Waveforms/Pitch/Pitch Envelope

[F1 (WG PRM)]

Parameter	Value	Explanation
Wave Group	INT, EXP, SAMP, MSAM	Group for the waveform that is to be the basis of the tone **INT:** Waveforms stored in internal **EXP:** Waveform stored in a Wave Expansion Board (SRX series) installed in EXP slots **SAMP:** Sample waveforms **MSAM:** Multisample waveforms
Wave Bank	PRST, USER, CARD	When the Wave Group is SAMP: PRST, USER, CARD When the Wave Group is MSAM: USER, CARD
Wave No. L (Mono) Wave No. R	----, 1–1228	Basic waveform for a tone (The upper limit will depend on the wave group.) When in monaural mode, only the left side (L) is specified. When in stereo, the right side (R) is also specified. If you want to select a left/right pair of Waves, select the left (L) Wave number, and then hold down [SHIFT] and press [F4 (STEREO)] to add a check mark (✔); the right (R) (Wave) will be recalled. * *When using a multisample in stereo, you must specify the same number for L and R.*
Wave Gain	-6, 0, +6, +12	Gain (amplification) of the waveform The value changes in 6 dB (decibel) steps—an increase of 6 dB doubles the waveform's gain. * *If you intend to use the Booster to distort the waveform's sound, set this parameter to its maximum value (p. 39).*
Wave Tempo Sync	OFF, ON	When you wish to synchronize a Phrase Loop to the clock (tempo), set this to "ON." * *This is valid only when a separately sold wave expansion board is installed, and a waveform that indicates a tempo (BPM) is selected as the sample for a tone.* If a waveform from a wave expansion board is selected for the tone, turning the Wave Tempo Sync parameter "ON" will cause pitch-related settings (p. 44) and FXM-related settings (p. 43) to be ignored. • If a sample is selected for a tone, you must first set the BPM (tempo) parameter of the sample. • If a sample is selected for a tone, Wave Tempo Sync will require twice the normal number of voices. • When this parameter is set to "ON," set the Tone Delay Time parameter (p. 51) to "0."

Phrase Loop

Phrase loop refers to the repeated playback of a phrase that's been pulled out of a song (e.g., by using a sampler). One technique involving the use of Phrase Loops is the excerpting of a Phrase from a pre-existing song in a certain genre, for example dance music, and then creating a new song with that Phrase used as the basic motif. This is referred to as "Break Beats."

Realtime Time Stretch

If the wave group is "SAMP" or "MSAM," and the Wave Tempo Sync parameter is turned "ON," you can vary the playback speed of the waveform without affecting the pitch.

Parameter marked with a "★" can be controlled using specified MIDI messages (Matrix Control, p. 49)

Parameter	Value	Explanation
FXM Switch	OFF, ON	This sets whether FXM will be used (ON) or not (OFF).
FXM Color	1–4	How FXM will perform frequency modulation Higher settings result in a grainier sound, while lower settings result in a more metallic sound.
FXM Depth ★	0–16	Depth of the modulation produced by FXM

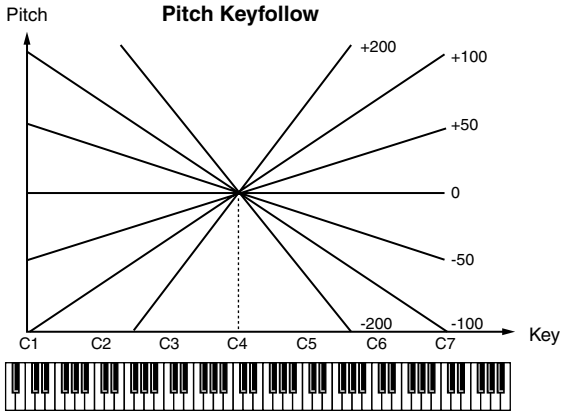
FXM

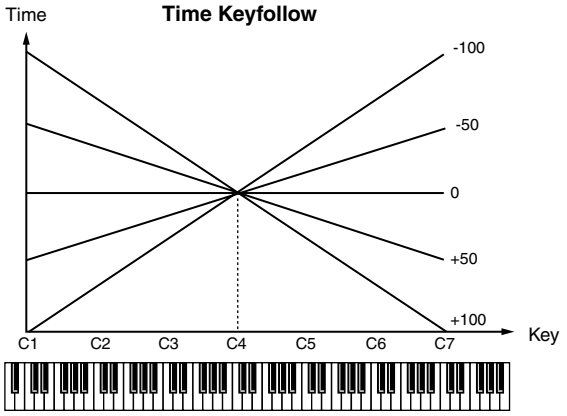
FXM (Frequency Cross Modulation) uses a specified waveform to apply frequency modulation to the currently selected waveform, creating complex overtones. This is useful for creating dramatic sounds or sound effects.

[F2 (PITCH)]

Parameter marked with a "★" can be controlled using specified MIDI messages (Matrix Control, p. 49)

Parameter	Value	Explanation
Tone Coarse Tune ★	-48– +48	Pitch of the tone's sound (in semitones, +/-4 octaves)
Tone Fine Tune ★	-50– +50	Pitch of the tone's sound (in 1-cent steps; one cent is 1/100th of a semitone)
Rand Pitch Depth	0–1200	Width of random pitch deviation that will occur each time a key is pressed (in 1-cent steps) If you do not want the pitch to change randomly, set this to "0."
Pitch Keyfollow	-200– +200	Amount of pitch change that will occur when you play a key one octave higher If you want the pitch to rise one octave as on a conventional keyboard, set this to "+100." If you want the pitch to rise two octaves, set this to "+200."
P-Env V-Sens	-63– +63	Keyboard playing dynamics can be used to control the depth of the pitch envelope. If you want the pitch envelope to have more effect for strongly played notes, set this parameter to a positive (+) value.
P-Env T1 V-Sens	-63– +63	This allows keyboard dynamics to affect the T1 of the Pitch envelope. If you want T1 to be speeded up for strongly played notes, set this parameter to a positive (+) value.
P-Env T4 V-Sens	-63– +63	Use this parameter when you want key release speed to affect the T4 value of the Pitch envelope. If you want T4 to be speeded up for quickly released notes, set this parameter to a positive (+) value.
P-Env Time KF (Time Keyfollow)	-100– +100	Use this setting if you want the pitch envelope times (T2–T4) to be affected by the keyboard location. Based on the pitch envelope times for the C4 key, positive (+) settings will cause notes higher than C4 to have increasingly shorter times.



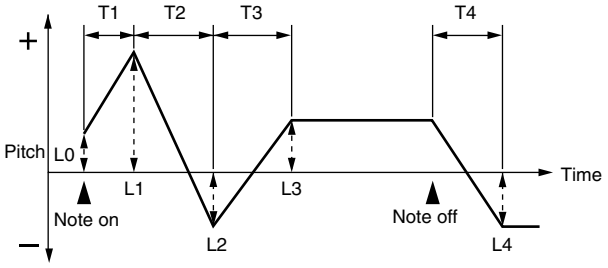


[F3 (PCH ENV)]

Parameter marked with a "★" can be controlled using specified MIDI messages (Matrix Control, p. 49)

Parameter	Value	Explanation
P-Env Depth	-12– +12	Depth of the Pitch envelope Higher settings will cause the pitch envelope to produce greater change. Negative (-) settings will invert the shape of the envelope.
P-Env Time 1–4 ★	0–127	Pitch envelope times (T1–T4) Higher settings will result in a longer time until the next pitch is reached.
P-Env Level 0–4	-63– +63	Pitch envelope levels (L0–L4) Specify how the pitch will change at each point, relative to the pitch set with Coarse Tune or Fine Tune.

Pitch Envelope



Parameter Group [F3 (TVF)]
Modifying the Brightness of a Sound with a Filter (TVF/TVF Envelope)

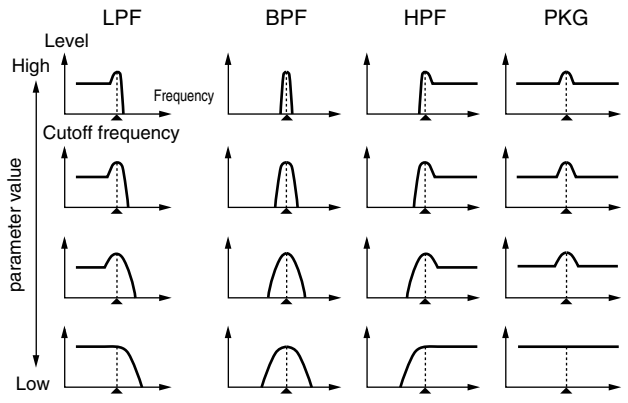
A filter cuts or boosts a specific frequency region to change a sound's brightness, thickness, or other qualities.

[F1 (TVF PRM)]

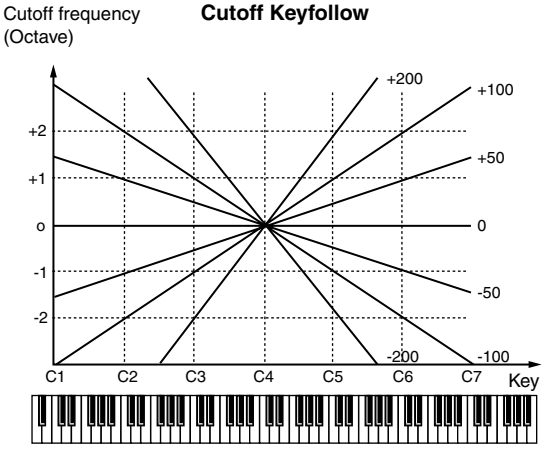
Parameter marked with a "★" can be controlled using specified MIDI messages
(Matrix Control, p. 49)

Parameter	Value	Explanation
Filter Type	OFF, LPF, BPF, HPF, PKG, LPF2, LPF3	Type of filter **OFF:** No filter is used. **LPF:** Low Pass Filter. This reduces the volume of all frequencies above the cutoff frequency in order to round off, or un-brighten the sound. **BPF:** Band Pass Filter. This leaves only the frequencies in the region of the cutoff frequency, and cuts the rest. This can be useful when creating distinctive sounds. **HPF:** High Pass Filter. This cuts the frequencies in the region below the cutoff frequency. This is suitable for creating percussive sounds emphasizing their higher tones. **PKG:** Peaking Filter. This emphasizes the frequencies in the region of the cutoff frequency. You can use this to create wah-wah effects by employing an LFO to change the cutoff frequency cyclically. **LPF2:** Low Pass Filter 2. Although frequency components above the Cutoff frequency are cut, the sensitivity of this filter is half that of the LPF. This filter is good for use with simulated instrument sounds such as the acoustic piano. **LPF3:** Low Pass Filter 3. Although frequency components above the Cutoff frequency are cut, the sensitivity of this filter changes according to the Cutoff frequency. While this filter is also good for use with simulated acoustic instrument sounds, the nuance it exhibits differs from that of the LPF2, even with the same TVF Envelope settings. * *If you set "LPF2" or "LPF3," the setting for the Resonance parameter will be ignored.*
Cutoff Frequency ★	0–127	Frequency at which the filter begins to have an effect on the waveform's frequency components
Resonance ★	0–127	Emphasizes the portion of the sound in the region of the cutoff frequency, adding character to the sound. * *Excessively high settings can produce oscillation, causing the sound to distort.*
Cutoff Keyfollow	-200– +200	Use this parameter if you want the cutoff frequency to change according to the key that is pressed. Relative to the cutoff frequency at the C4 key (center C), positive (+) settings will cause the cutoff frequency to rise for notes higher than C4, and negative (-) settings will cause the cutoff frequency to fall for notes higher than C4. Larger settings will produce greater change.

Resonance



Cutoff Keyfollow



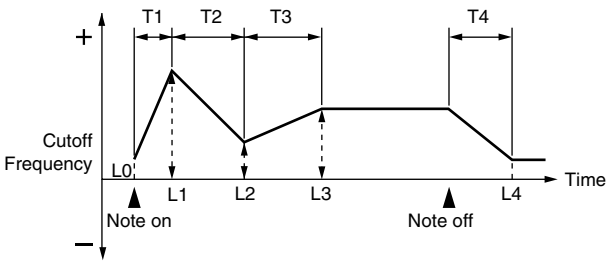
Parameter	Value	Explanation
Cutoff V-Curve	FIX, 1–7	Curve that determines how keyboard playing dynamics (velocity) will affect the cutoff frequency Set this to "FIX" if you don't want the Cutoff frequency to be affected by the keyboard velocity. 
Cutoff V-Sens	-63– +63	Use this parameter when changing the cutoff frequency to be applied as a result of changes in playing velocity. If you want strongly played notes to raise the cutoff frequency, set this parameter to positive (+) settings.
Resonance V-Sens	-63– +63	This allows keyboard velocity to modify the amount of Resonance. If you want strongly played notes to have a greater Resonance effect, set this parameter to positive (+) settings.
F-Env V-Curve	FIX, 1–7	Curve that determines how keyboard playing dynamics (velocity) will affect the TVF envelope Set this to "FIX" if you don't want the TVF Envelope to be affected by the keyboard velocity. 
F-Env V-Sens	-63– +63	Specifies how keyboard playing dynamics will affect the depth of the TVF envelope. Positive (+) settings will cause the TVF envelope to have a greater effect for strongly played notes, and negative (-) settings will cause the effect to be less.
F-Env T1 V-Sens	-63– +63	This allows keyboard dynamics to affect the T1 of the TVF envelope. If you want T1 to be speeded up for strongly played notes, set this parameter to a positive (+) value.
F-Env T4 V-Sens	-63– +63	Use this parameter when you want key release speed to affect the T4 value of the TVF envelope. If you want T4 to be speeded up for quickly released notes, set this parameter to a positive (+) value.

[F2 (TVF ENV)]

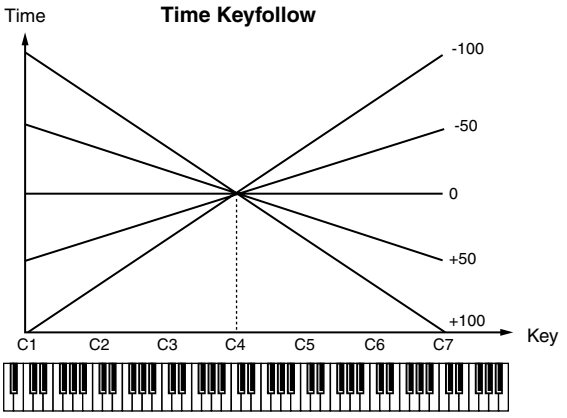
Parameter marked with a "★" can be controlled using specified MIDI messages
(Matrix Control, p. 49)

Parameter	Value	Explanation
F-Env Depth	-63– +63	Depth of the TVF envelope Higher settings will cause the TVF envelope to produce greater change. Negative (-) settings will invert the shape of the envelope.
F-Env Time KF (Time Keyfollow)	-100– +100	Use this setting if you want the TVF envelope times (T2–T4) to be affected by the keyboard location. Based on the TVF envelope times for the C4 key (center C), positive (+) settings will cause notes higher than C4 to have increasingly shorter times.
F-Env Time 1–4 ★	0–127	TVF envelope times (T1–T4) Higher settings will lengthen the time until the next cutoff frequency level is reached.
F-Env Level 0–4	0–127	TVF envelope levels (L0–L4) Specify how the cutoff frequency will change at each point, relative to the Cutoff Frequency value.

TVF Envelope



Time Keyfollow

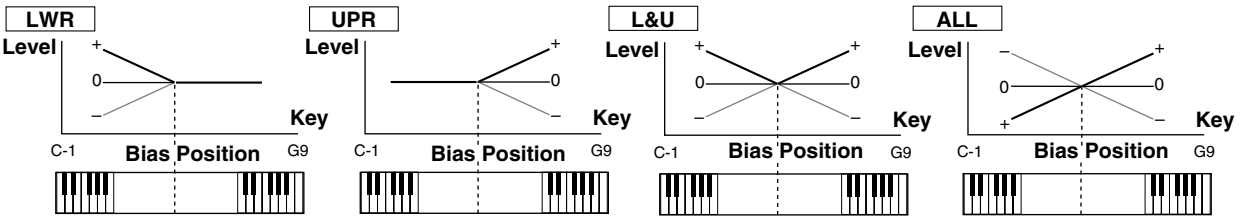


Parameter Group [F4 (TVA)]
Adjusting the Volume (TVA/TVA Envelope)

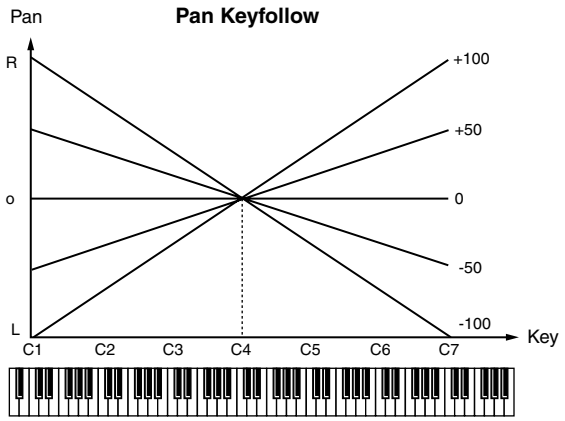
[F1 (TVA PRM)]

Parameter marked with a "★" can be controlled using specified MIDI messages
(Matrix Control, p. 49)

Parameter	Value	Explanation
Tone Level ★	0–127	Volume of the tone. This setting is useful primarily for adjusting the volume balance between tones.
Level V-Curve	FIX, 1–7	Curve that determines how keyboard playing dynamics (velocity) will affect the volume Set this to "FIX" if you don't want the volume of the tone to be affected by the keyboard velocity. 
Level V-Sens	-63– +63	Set this when you want the volume of the tone to change depending on keyboard playing dynamics. Set this to a positive (+) value to have the changes in tone volume increase the more forcefully the keys are played; to make the tone play more softly as you play harder, set this to a negative (-) value.
Bias	Bias causes the volume to be affected by the keyboard position. This is useful for changing volume through keyboard position (pitch) when playing acoustic instruments.	
Bias Level	-100– +100	Angle of the volume change that will occur in the selected Bias Direction Larger settings will produce greater change. Negative (-) values will invert the change direction.
Bias Position	C - –G9	Key relative to which the volume will be modified
Bias Direction	LWR, UPR, L&U, ALL	Direction in which change will occur starting from the Bias Position **LWR:** The volume will be modified for the keyboard area below the Bias Point. **UPR:** The volume will be modified for the keyboard area above the Bias Point. **L&U:** The volume will be modified symmetrically toward the left and right of the Bias Point. **ALL:** The volume changes linearly with the bias point at the center.



Parameter	Value	Explanation
Tone Pan ★	L64–0–63R	Left/right position of the tone
Pan Keyfollow	-100– +100	Use this parameter if you want key position to affect panning. Positive (+) settings will cause notes higher than C4 key (center C) to be panned increasingly further toward the right, and negative (-) settings will cause notes higher than C4 key (center C) to be panned toward the left. Larger settings will produce greater change.



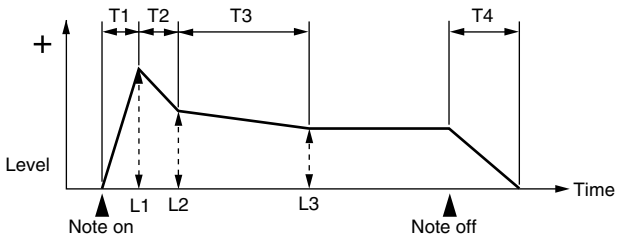
Parameter	Value	Explanation
Random Pan Depth	0–63	Use this parameter when you want the stereo location to change randomly each time you press a key. Higher settings will produce a greater amount of change.
Alter Pan Depth	L63–0–63R	This setting causes panning to be alternated between left and right each time a key is pressed. Higher settings will produce a greater amount of change. "L" or "R" settings will reverse the order in which the pan will alternate between left and right. For example if two tones are set to "L" and "R" respectively, the panning of the two tones will alternate each time they are played. * *When any value from Type "2"–"10" is selected for the Structure parameter in the Pan KF, Rnd Pan Depth, Alter Pan Depth parameter settings, the output of tones 1 and 2 are joined in tone 2, and the output of tones 3 and 4 are joined in tone 4. For this reason, tone 1 will follow the settings of tone 2, and tone 3 will follow the settings of tone 4 (p. 38).*

[F2 (TVA ENV)]

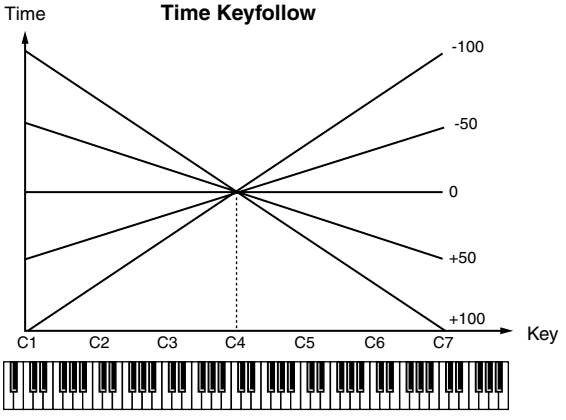
Parameter marked with a "★" can be controlled using specified MIDI messages (Matrix Control, p. 49)

Parameter	Value	Explanation
A-Env T1 V-Sens	-63– +63	This allows keyboard dynamics to affect the T1 of the TVA envelope. If you want Time 1 to be speeded up for strongly played notes, set this parameter to a positive (+) value. If you want it to be slowed down, set this to a negative (-) value.
A-Env T4 V-Sens	-63– +63	Use this parameter when you want key release speed to affect the T4 value of the TVA envelope. If you want T4 to be speeded up for quickly released notes, set this parameter to a positive (+) value. If you want it to be slowed down, set this to a negative (-) value.
A-Env Time KF (Time Keyfollow)	-100– +100	Use this setting if you want the TVA envelope times (T2–T4) to be affected by the keyboard location. Based on the TVA envelope times for the C4 key (center C), positive (+) settings will cause notes higher than C4 to have increasingly shorter times, and negative (-) settings will cause them to have increasingly longer times. Larger settings will produce greater change.
A-Env Time 1–4 ★	0–127	TVA envelope times (T1–T4) Higher settings will lengthen the time until the next volume level is reached.
A-Env Level 1–3	0–127	TVA envelope levels (L1–L3) Specify how the volume will change at each point, relative to the Tone Level value.

TVA Envelope



Time Keyfollow



Parameter Group [F5 (CTRL)]
Matrix Control Settings/Miscellaneous Settings

[F1 (CTRL1)]–[F4 (CTRL4)]

The function which allows you use MIDI messages to make changes in realtime to the tone parameters is called the **Matrix Control**. Up to four Matrix Controls can be used in a single patch.

To use the Matrix Control, specify which MIDI message (CTRL Source parameter) will be used to control which parameter (CTRL Destination parameter), and how greatly (CTRL Sens parameter), and the tone to which the effect is applied (CTRL Switch parameter).

Parameter	Value	Explanation
CTRL 1–4 Source	OFF, CC01–31, 33–95, PITCH BEND, AFTERTOUCH, SYS CTRL1–4, VELOCITY, KEY FOLLOW, TEMPO, LFO1, LFO2, PITCH ENV, TVF ENV, TVA ENV	MIDI message used to change the tone parameter with the Matrix Control **OFF:** Matrix control will not be used. **CC01–31, 33–95:** Controller numbers 1–31, 33–95 **PITCH BEND:** Pitch Bend **AFTERTOUCH:** Aftertouch **SYS CTRL1–4:** MIDI messages used as common matrix controls **VELOCITY:** Pressure you press a key with **KEY FOLLOW:** Keyboard position with C4 as 0 **TEMPO:** The specified tempo (sequencer tempo) or the tempo of an external MIDI sequencer. **LFO1:** LFO 1 **LFO2:** LFO 2 **PITCH ENV:** Pitch envelope **TVF ENV:** TVF envelope **TVA ENV:** TVA envelope

MEMO

Velocity and Key follow correspond to Note messages.

TIP

Although there are no MIDI messages for LFO 1 through TVA Envelope, they can be used as Matrix Control. In this case, you can change the tone settings in realtime by playing patches.

- If you want to use common controllers for the entire Fantom-Xa, select "SYS CTRL1"–"SYS CTRL4." MIDI messages used as System Control 1–4 are set with the System Ctrl 1–4 Source parameters (p. 196).

NOTE

There are parameters that determine whether or not Pitch Bend, Controller Number 11 (Expression) and Controller Number 64 (Hold 1) are received (p. 51). When these settings are "ON," and the MIDI messages are received, then when any change is made in the settings of the desired parameter, the Pitch Bend, Expression, and Hold 1 settings also change simultaneously. If you want to change the targeted parameters only, then set these to "OFF."

- There are parameters that let you specify whether specific MIDI messages will be received for each channel in a performance (p. 79). When a patch with Matrix Control settings is assigned to a part, confirm that any MIDI messages used for the Matrix Control will be received. If the Fantom-Xa is set up such that reception of MIDI messages is disabled, then the Matrix Control will not function.

Parameter	Value	Explanation
CTRL 1–4 Destination 1–4	OFF, PITCH, CUTOFF, RESONANCE, LEVEL, PAN, OUTPUT LEVEL, CHORUS SEND, REVERB SEND, LFO1/2 PITCH DEPTH, LFO1/2 TVF DEPTH, LFO1/2 TVA DEPTH, LFO1/2 PAN DEPTH, LFO1/2 RATE, PCH ENV A-TIME, PCH ENV D-TIME, PCH ENV R-TIME, TVF ENV A-TIME, TVF ENV D-TIME, TVF ENV R-TIME, TVA ENV A-TIME, TVA ENV D-TIME, TVA ENV R-TIME, TMT, FXM DEPTH, MFX CTRL1–4, TIME	Tone parameter that is to be controlled when using the Matrix Control Up to four parameters can be specified for each Matrix Control, and controlled simultaneously. * *In this manual, Parameters that can be controlled using the Matrix Control are marked with a "★."*

Parameter	Value	Explanation
CTRL 1–4 Sens 1–4	-63– +63	Amount of the Matrix Control's effect that is applied If you wish to modify the selected parameter in a positive (+) direction—i.e., a higher value, toward the right, or faster etc.—from its current setting, select a positive (+) value. If you wish to modify the selected parameter in a negative (-) direction—i.e., a lower value, toward the left, or slower etc.—from its current setting, select a negative (-) value. For either positive or negative settings, greater absolute values will allow greater amounts of change. Set this to "0" if you don't want to apply the effect.
CTRL 1–4 Switch 1–4	OFF, ON, REVS	Tone to which the effect is applied when using the Matrix Control **OFF:** The effect will not be applied. **ON:** The effect will be applied. **REVS:** The effect will be applied in reverse.

[F5 (MISC)]

Tone Delay

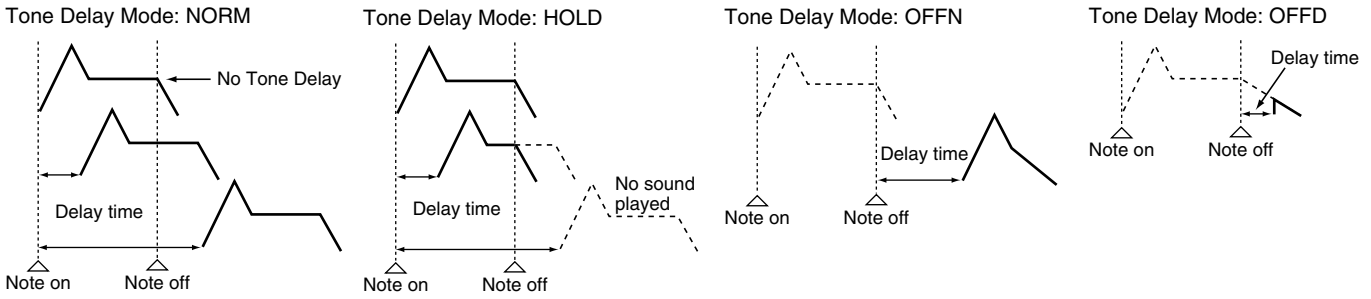
This produces a time delay between the moment a key is pressed (or released), and the moment the tone actually begins to sound. You can also make settings that shift the timing at which each tone is sounded. This differs from the Delay in the internal effects, in that by changing the sound qualities of the delayed tones and changing the pitch for each tone, you can also perform arpeggio-like passages just by pressing one key.

You can also synchronize the tone delay time to the tempo of the sequencer.

* *If you are not going to use Tone Delay, set the Delay Mode parameter to "NORM" and Delay Time parameter to "0."*

- If the Structure parameters set in the range of "2"–"10," the output of tones 1 and 2 will be combined into tone 2, and the output of tones 3 and 4 will be combined into tone 4. For this reason, tone 1 will follow the settings of tone 2, and tone 3 will follow the settings of tone 4 (p. 38).

Parameter	Value	Explanation
Tone Delay Mode	NORM, HOLD, OFFN, OFFD	Type of tone delay **NORM:** The tone begins to play after the time specified in the Delay Time parameter has elapsed. **HOLD:** Although the tone begins to play after the time specified in the Delay Time parameter has elapsed, if the key is released before the time specified in the Delay Time parameter has elapsed, the tone is not played. **OFFN:** Rather than being played while the key is pressed, the tone begins to play once the period of time specified in the Delay Time parameter has elapsed after release of the key. This is effective in situations such as when simulating noises from guitars and other instruments. **OFFD:** Rather than being played while the key is pressed, the tone begins to play once the period of time specified in the Delay Time parameter has elapsed after release of the key. Here, however, changes in the TVA Envelope begin while the key is pressed, which in many cases means that only the sound from the release portion of the envelope is heard. * *If you have selected a waveform that is a decay-type sound (i.e., a sound that fades away naturally even if the key is not released), selecting "OFFN" or "OFFD" may result in no sound being heard.*
Tone Delay Time	0-127, Note	Time from when the key is pressed (or if the Delay Mode parameter is set to "OFFN" or "OFFD," the time from when the key is released) until when the tone will sound Tone Delay Time specifies the beat length for the synchronized tempo when the tempo that specifies the elapsed time until the tone is sounded (Patch Tempo) is synchronized with the tempo set in a sequencer.



Parameter	Value	Explanation
Tone Env Mode	NSUS, SUST	When a loop waveform (p. 37) is selected, the sound will normally continue as long as the key is pressed. If you want the sound to decay naturally even if the key remains pressed, set this to "NSUS." * *If a one-shot type wave (p. 37) is selected, it will not sustain even if this parameter is set to "SUST."*
Rx Bender	OFF, ON	For each tone, specify whether MIDI Pitch Bend messages will be received (ON), or not (OFF).
Rx Expression	OFF, ON	For each tone, specify whether MIDI Expression messages will be received (ON), or not (OFF).
Rx Hold-1	OFF, ON	For each tone, specify whether MIDI Hold-1 messages will be received (ON), or not (OFF). * *If "NSUS" is selected for Env Mode parameter, this setting will have no effect.*
Rx Pan Mode	CONT, K-ON	For each tone, specify how pan messages will be received. **CONT:** Whenever Pan messages are received, the stereo position of the tone will be changed. **K-ON:** The pan of the tone will be changed only when the next note is played. If a pan message is received while a note is sounding, the panning will not change until the next key is pressed. * *The channels cannot be set so as not to receive Pan messages.*
Redamper Sw	OFF, ON	You can specify, on an individual tone basis, whether or not the sound will be held when a Hold 1 message is received after a key is released, but before the sound has decayed to silence. If you want to sustain the sound, set this "ON." When using this function, also set the Rx Hold-1 parameter "ON." This function is effective for piano sounds.

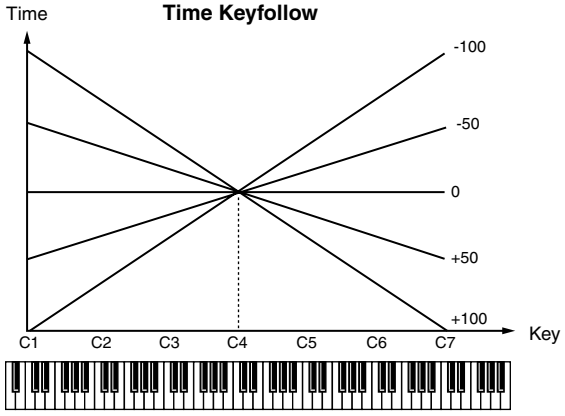
Parameter Group [F6 (LFO&OUT)] Modulating Sounds/Output

An LFO (Low Frequency Oscillator) causes change over a cycle in a sound. Each tone has two LFOs (LFO1/LFO2), and these can be used to cyclically change the pitch, cutoff frequency and volume to create modulation-type effects such as vibrato, wah and tremolo. Both LFOs have the same parameters so only one explanation is needed.

[F1 (LFO 1)], [F2 (LFO 2)]

Parameter marked with a "★" can be controlled using specified MIDI messages
(Matrix Control, p. 49)

Parameter	Value	Explanation
Wave Form	SIN, TRI, SAWU, SAWD, SQR, RND, BD-U, BD-D, TRP, S&H, CHS, VSIN, STEP	Waveform of the LFO **SIN:** Sine wave **TRI:** Triangle wave **SAWU:** Sawtooth wave **SAWD:** Sawtooth wave (negative polarity) **SQR:** Square wave **RND:** Random wave **BD-U:** Once the attack of the waveform output by the LFO is allowed to develop in standard fashion, the waveform then continues without further change. **BD-D:** Once the decay of the waveform output by the LFO is allowed to develop in standard fashion, the waveform then continues without further change. **TRP:** Trapezoidal wave **S&H:** Sample & Hold wave (one time per cycle, LFO value is changed) **CHS:** Chaos wave **VSIN:** Modified sine wave. The amplitude of a sine wave is randomly varied once each cycle. **STEP:** A waveform generated by the data specified by LFO Step 1–16. This produces stepped change with a fixed pattern similar to a step modulator. * *If you set this to "BD-U" or "BD-D," you must turn the Key Trigger parameter to "ON." If this is "OFF," it will have no effect.*
Rate ★	0–127, Note	Modulation speed of the LFO LFO Rate sets the beat length for the synchronized tempo is synchronized with the tempo set in a sequencer. * *This setting will be ignored if the Waveform parameter is set to "CHAOS."*
Rate Detune	0–127	Makes subtle changes in the LFO cycle rate (Rate parameter) each time a key is pressed. Higher settings will cause greater change. This parameter is invalid when Rate is set to "note."
Offset	-100–+100	Raises or lowers the LFO waveform relative to the central value (pitch or cutoff frequency). Positive (+) settings will move the waveform so that modulation will occur from the central value upward. Negative (-) settings will move the waveform so that modulation will occur from the central value downward.
Delay Time	0–127	Time elapsed before the LFO effect is applied (the effect continues) after the key is pressed (or released) When using violin, wind, or certain other instrument sounds in a performance, rather than having vibrato added immediately after the sounds are played, it can be effective to add the vibrato after the note is drawn out somewhat.
Delay Time KF (Time Keyfollow)	-100–+100	Adjusts the value for the Delay Time parameter depending on the key position, relative to the C4 key (center C). To decrease the time with each higher key that is pressed in the upper registers, select a positive value; to increase the elapsed time, select a negative value. Larger settings will produce greater change. If you do not want the elapsed time to change according to the key pressed, set this to "0."

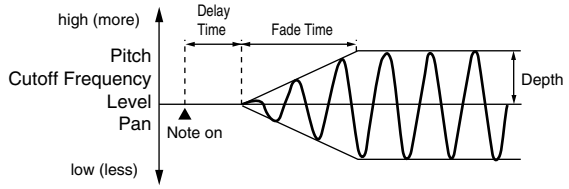


Parameter marked with a "★" can be controlled using specified MIDI messages
(Matrix Control, p. 49)

Parameter	Value	Explanation
Fade Mode	ON <, ON >, OFF <, OFF >	How the LFO will be applied
Fade Time	0–127	Time over which the LFO amplitude will reach the maximum (minimum)
Key Trigger	OFF, ON	Specifies whether the LFO cycle will be synchronized to begin when the key is pressed (ON) or not (OFF).
Pitch Depth ★	-63– +63	How deeply the LFO will affect pitch
TVF Depth ★	-63– +63	How deeply the LFO will affect the cutoff frequency
TVA Depth ★	-63– +63	How deeply the LFO will affect the volume
Pan Depth ★	-63– +63	How deeply the LFO will affect the pan
	Positive (+) and negative (-) settings for the Depth parameter result in differing kinds of change in pitch and volume. For example, if you set the Depth parameter to a positive (+) value for one tone, and set another tone to the same numerical value, but make it negative (-), the modulation phase for the two tones will be the reverse of each other. This allows you to shift back and forth between two different tones, or combine it with the Pan setting to cyclically change the location of the sound image. * *When the Structure parameter is set to any value from "2" through "10," the output of tones 1 and 2 will be combined into tone 2, and the output of tones 3 and 4 will be combined into tone 4. This applies to the Pan Depth parameter settings. For this reason, tone 1 will follow the settings of tone 2, and tone 3 will follow the settings of tone 4 (p. 38).*	

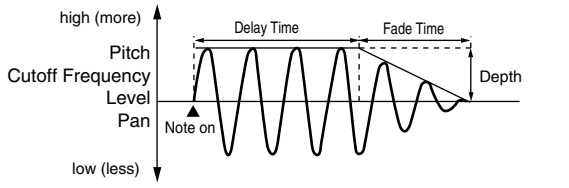
How to Apply the LFO

● Apply the LFO gradually after the key is pressed



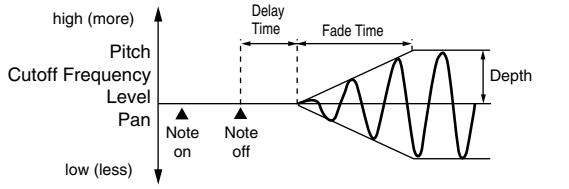
Fade Mode: ON <
Delay Time: Time from when the keyboard is played until the LFO begins to be applied
Fade Time: Time over which the LFO amplitude will reach the maximum after the Delay Time has elapsed

● Apply the LFO immediately when the key is pressed, and then gradually begin to decrease the effect



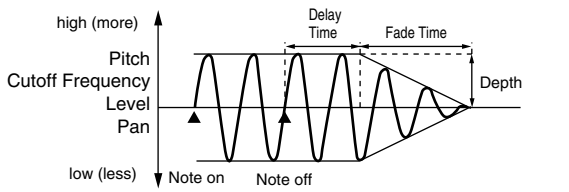
Fade Mode: ON >
Delay Time: Time that the LFO will continue after the keyboard is played
Fade Time: Time over which the LFO amplitude will reach the minimum after the Delay Time has elapsed

● Apply the LFO gradually after the key is released



Fade Mode: OFF <
Delay Time: Time from when the keyboard is released until the LFO begins to be applied
Fade Time: Time over which the LFO amplitude will reach the maximum after the Delay Time has elapsed

● Apply the LFO from when the key is pressed until it is released, and gradually begin to decrease the effect when the key is released



Fade Mode: OFF >
Delay Time: Time that the LFO will continue after the keyboard is released
Fade Time: Time over which the LFO amplitude will reach the minimum after the Delay Time has elapsed

[F3 (STEP)]

Parameter	Value	Explanation
Step Type	TYP1, TYP2	When generating an LFO waveform from the data specified in LFO Step 1–16, specify whether the level will change abruptly at each step or will be connected linearly. **TYP1:** stair-step change **TYP2:** linear change
Step 1–16	-36– +36	Specifies the data for the Step LFO. If the LFO Pitch Depth is +63, each +1 unit of the step data corresponds to a pitch of +50 cents.

[F4 (OUTPUT)]

Parameter	Value	Explanation
Patch Out Assign	MFX, A, B, 1–4, TONE	Specifies how the direct sound of each patch will be output. **MFX:** Output in stereo through multi-effects. You can also apply chorus or reverb to the sound that passes through multi-effects. **A, B:** Output to the OUTPUT A (MIX) jacks or OUTPUT B jacks in stereo without passing through multi-effects. **1–4:** Output to the INDIVIDUAL 1–4 jacks in mono without passing through multi-effects. **TONE:** Outputs according to the settings for each tone. * *If you've made settings so that sounds are separately routed to the INDIVIDUAL 1 jack and INDIVIDUAL 2 jack, but no plug is actually inserted in the INDIVIDUAL 2 jack, the sounds routed to INDIVIDUAL 1 and INDIVIDUAL 2 will be mixed and output from the INDIVIDUAL 1 jack.* * *If the Mix/Parallel parameter is set to "MIX," all sounds are output from the OUTPUT A (MIX) jacks in stereo (p. 194).*
Tone Out Assign	MFX, A, B, 1–4	Specifies how the direct sound of each tone will be output. **MFX:** Output in stereo through multi-effects. You can also apply chorus or reverb to the sound that passes through multi-effects. **A, B:** Output to the OUTPUT A (MIX) jacks or OUTPUT B jacks in stereo without passing through multi-effects. **1–4:** Output to the INDIVIDUAL 1–4 jacks in mono without passing through multi-effects. * *If the Patch Out Assign is set to anything other than "TONE," these settings will be ignored.* * *When the Structure Type parameter has a setting of Type "2"–"10," the outputs of tones 1 and 2 will be combined with tone 2, and the outputs of tones 3 and 4 will be combined with tone 4. For this reason, tone 1 will follow the settings of tone 2, and tone 3 will follow the settings of tone 4 (p. 38).* * *If you've made settings so that sounds are separately routed to the INDIVIDUAL 1 jack and INDIVIDUAL 2 jack, but no plug is actually inserted in the INDIVIDUAL 2 jack, the sounds routed to INDIVIDUAL 1 and INDIVIDUAL 2 will be mixed and output from the INDIVIDUAL 1 jack.* * *If the Mix/Parallel parameter is set to "MIX," all sounds are output from the OUTPUT A (MIX) jacks in stereo (p. 194).* * *If you've set Tone Out Assign to "MFX," set the MFX Output Assign parameter (p. 159) to specify the output destination of the sound that has passed through the multi-effects.* * *Sounds are output to chorus and reverb in mono at all times.* * *The output destination of the signal after passing through the chorus is set with the Chorus Output Select and Chorus Output Assign parameters (p. 159).* * *The output destination of the signal after passing through the reverb is set with the Reverb Output Assign parameter (p. 159).*
Tone Out Level	0–127	Level of the signal that is sent to the output destination specified by Tone Output Assign
Send Level (Output = MFX)		
Tone Chorus Send	0–127	Level of the signal sent to chorus for each tone if the tone is sent through MFX
Tone Reverb Send	0–127	Level of the signal sent to reverb for each tone if the tone is sent through MFX
Send Level (Output = non MFX)		
Tone Chorus Send	0–127	Level of the signal sent to chorus for each tone if the tone is not sent through MFX
Tone Reverb Send	0–127	Level of the signal sent to reverb for each tone if the tone is not sent through MFX

Setting Effects for a Patch (Effects/MFX/MFX Control/Chorus/Reverb)

For details regarding effect settings, refer to the pages shown below.

- **Making Effect Settings** (p. 157)
- **Making Multi-Effects Settings (MFX1–3)** (p. 162)
- **Making Chorus Settings** (p. 189)
- **Making Reverb Settings** (p. 190)

Creating a Rhythm Set

With the Fantom-Xa, you have total control over a wide variety of settings. Each item that can be set is known as a **parameter**. When you change the values of parameters, you are doing what is referred to as **Editing**. This chapter explains the procedures used in creating rhythm sets, and the functions of the rhythm set parameters.

How to Make Rhythm Set Settings

1. **Press [PATCH/RHYTHM] to access the PATCH PLAY screen.**

2. **Select the part (keyboard or pad) and rhythm set whose settings you want to edit (p. 30).**

* *You cannot edit the rhythm sets in the GM2 group.*

3. **Press [PATCH EDIT] to access the RHYTHM EDIT screen.**

4. **Press [F1 (COMMON)]–[F6 (OUTPUT)] to select the parameter group.**

5. **Press [F1]–[F6], and then press to select the parameter.**
   Some parameters can be set independently for each wave.
   To select the wave you want to edit, press TONE SELECT [1]–[4] (PART/TRACK [5]–[8]) or .

6. **Use the VALUE dial or [INC] [DEC] to change the value.**

7. **Repeat steps 4–6 to set each parameter.**

8. **Press [WRITE] to save the changes you've made (p. 57). If you do not wish to save changes, press [EXIT] to return to the PATCH PLAY screen.**

   If you return to the PATCH PLAY screen without saving, an "*" will be displayed at the left of the rhythm set group.

NOTE

If you turn off the power or select a different sound while the display indicates "*," your edited rhythm set will be lost.

You can edit while viewing a graphic display of the most frequently used important parameters. Zoom Edit lets you edit the following parameters.

1. **With the screen for editing the above parameters shown, press [F6 (ZOOM)].**
   The Zoom Edit screen will appear.

2. **Press [F1]–[F4] to select the parameter group.**

3. **Press [CURSOR] to select the parameter.**

4. **Use the VALUE dial or [INC] [DEC] to change the value.**
   You can use the REALTIME CONTROL knobs to set the value.

5. **When you have finished editing, press [F6 (EXIT)].**

If a number is displayed for the parameter name (, , ,), you can use the REALTIME CONTROL knobs (C1–C4) to set the value.
If you press the button located at the right of the REALTIME CONTROL knobs to make the indicator light, the knobs will control their original functions.

You can use the same knobs to edit the values in the Zoom Edit screen as well.

Initializing Rhythm Set Settings

"Initialize" means to return the settings of the currently selected sound to a standard set of values.

* *The Initialize operation will affect only the currently selected sound; the sounds that are stored in user memory will not be affected. If you wish to restore all of the Fantom-Xa's settings to their factory values, perform a Factory Reset (p. 203).*

1. **Press [PATCH/RHYTHM] to access the PATCH PLAY screen.**
2. **Select the part (keyboard or pad) and rhythm set that you want to initialize (p. 30).**
3. **Press [PATCH EDIT] to access the RHYTHM EDIT screen.**
   Press keys to specify the key that is to be initialized.
4. **Hold down [SHIFT] and press [F5 (INIT)].**
   The Rhythm Initialize window appears.

5. **Press ▲ ▼ to select the initialization type.**
   All: All keys of the rhythm set will be initialized.
   Key: One key will be initialized.
6. **Press [F6 (SELECT)].**
   A message will ask you for confirmation.
7. **Press [F6 (EXEC)].**
   The initialization will be carried out.

* *To cancel, press [F5 (CANCEL)].*

Copying Rhythm Tone Settings

This operation copies the settings of any desired rhythm set to the currently selected rhythm set.

1. **Press [PATCH/RHYTHM] to access the PATCH PLAY screen.**
2. **Select the part (keyboard or pad) and the copy-destination rhythm set (p. 30).**
3. **Press [PATCH EDIT] to access the RHYTHM EDIT screen.**
4. **Hold down [SHIFT] and press [F6 (TONE CPY)].**
   The Rhythm Tone Copy window appears.

5. **Press [CURSOR] to move the cursor, and use the VALUE dial or [INC] [DEC] to select the "Source (copy-source)" group and number, and the rhythm tone number.**

* *By pressing [F4 (COMPR)] to add a check mark (✔), you can check the copy-source rhythm set (Compare function).*

6. **Press [CURSOR] to move the cursor, and select the "Destination (copy-destination)" rhythm tone number.**
7. **Press [F6 (EXEC)].**
   A message will ask you for confirmation.
8. **Press [F6 (EXEC)] to execute the copy operation.**

* *To cancel, press [F5 (CANCEL)].*

The Compare Function

For the Rhythm Tone Copy operations, you can use the Compare function.

If you want to play the copy-source rhythm set, press [F4 (COMPR)] to add a check mark (✔). Now you can play the copy-source rhythm set from the keyboard or pads.

* *The rhythm set auditioned using the Compare function may sound slightly different than when it is played normally.*

Saving Rhythm Sets You've Created (Write)

Changes you make to sound settings are temporary, and will be lost if you turn off the power or select another sound. If you want to keep the modified sound, you must save it in the internal USER group (user memory) or CARD group (memory card).

When you edit the rhythm set settings, an "*" will appear in the PATCH PLAY screen.

NOTE

When you perform the save procedure, the data that previously occupied the save destination will be lost.

1. Make sure that the rhythm set you wish to save is selected.

2. Press [WRITE].

The WRITE MENU screen appears.

3. Press [F2 (PAT/RHY)].

* *Alternatively, you can use ▲ or ▼ to select "Patch/Rhythm," and then press [ENTER].*

The RHYTHM SET NAME screen appears.

4. Assign a name to the rhythm set.

cf.

For details on assigning names, refer to p. 28.

5. When you have finished inputting the name, press [F6 (WRITE)].

A screen will appear, allowing you to select the write-destination rhythm set.

6. Use the VALUE dial, [INC] [DEC], or ▲ ▼ and [F1 (USER)] [F2 (CARD)] to select the write destination and rhythm set number.

7. Press [F6 (WRITE)].

A message will ask you for confirmation.

8. Press [F6 (EXEC)] to execute the save operation.

* *To cancel, press [F5 (CANCEL)].*

NOTE

Never switch off the Fantom-Xa while data is being saved.

One-shot Waveform and Loop Waveform

The internal waveforms of the Fantom-Xa fall into the following two groups.

One-shot:

These waveforms contain sounds that have short decays. A one-shot waveform records the initial rise and fall of the sound.

The Fantom-Xa also contains many other one-shot waveforms that are elements of other sounds. These include attack components such as piano-hammer sounds and guitar fret noises.

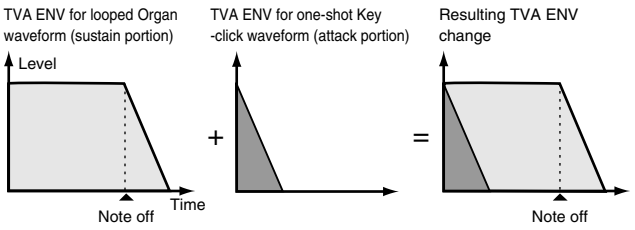
* *It is not possible to use the envelope to modify a one-shot waveform to create a decay that is longer than the original waveform, or to turn it into a sustaining sound.*

Loop:

These waveforms include sounds with long decays as well as sustained sounds. Loop waveforms repeatedly play back (loop) the portion of the waveform after the sound has reached a relatively steady state.

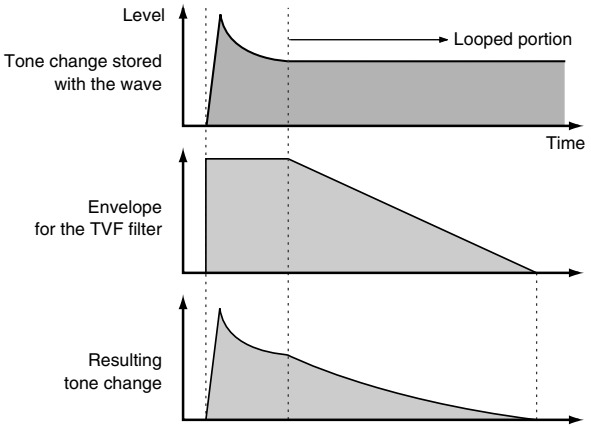
The Fantom-Xa's looped waveforms also include components of other sounds, such as piano-string resonant vibrations and the hollow sounds of brass instruments.

The following diagram shows an example of sound (electric organ) that combines one-shot and looped waveforms.



Tips for Using an Acoustic Instrument's Waveform

With many acoustic instruments such as piano and sax, extreme timbral changes occur during the first few moments of each note. This initial attack is what defines much of the instrument's character. For such waveforms, it is best to use the complex tonal changes of the attack portion of the waveform just as they are, and to use the envelope only to modify the decay portion.



Functions of Rhythm Set Parameters

Parameter Group [F1 (COMMON)] Settings Common to the Entire Rhythm Set

[F1 (GENERAL)]

Parameter	Value	Description
Rhythm Level	0–127	Volume of the rhythm set
Rhythm Tone Name		You can assign a name of up to 12 characters to the rhythm tone. Press ◀ ▶ to move the cursor, and use the VALUE dial or [INC] [DEC] to select characters.

[F2 (CTRL)]

Parameter	Value	Explanation
Assign Type	MULTI, SINGLE	Sets the way sounds are played when the same key is pressed a number of times. **MULTI:** Layer the sound of the same keys. Even with continuous sounds where the sound plays for an extended time, such as with crash cymbals, the sounds are layered, without previously played sounds being eliminated. **SINGLE:** Only one sound can be played at a time when the same key is pressed. With continuous sounds where the sound plays for an extended time, the previous sound is stopped when the following sound is played.
Mute Group	OFF, 1–31	On an actual acoustic drum set, an open hi-hat and a closed hi-hat sound can never occur simultaneously. To reproduce the reality of this situation, you can set up a Mute Group. The Mute Group function allows you to designate two or more rhythm tones that are not allowed to sound simultaneously. Up to 31 Mute Groups can be used. rhythm tones that are not belong to any such group should be set to "OFF."
Tone Env Mode	NO-SUS, SUSTAIN	When a loop waveform (p. 57) is selected, the sound will normally continue as long as the key is pressed. If you want the sound to decay naturally even if the key remains pressed, set this to "NO-SUS." * *If a one-shot type wave (p. 57) is selected, it will not sustain even if this parameter is set to "SUSTAIN."*
Tone Pitch Bend Range	0–48	Amount of pitch change in semitones (4 octaves) that will occur when the Pitch Bend Lever is moved The amount of change when the lever is tilted is set to the same value for both left and right sides.
One Shot Mode	OFF, ON	**ON:** The sound will play back until the end of the waveform (or the end of the envelope, whichever comes first). If you have set Wave Group (p. 59) to SAMP, the loop setting will be forced to ONE SHOT.
Aftertouch Time Ctrl Sens	-63– +63	If Wave Group is set to SAMP and Wave Tempo Sync is ON, aftertouch will control the amount of time stretching/shrinking caused by Time Stretch. If Time Stretch is not being applied, nothing will happen. If set to "+" the stretch/shrink time will become shorter, and if set to "-" the time will become longer.

[F3 (RX)]

Parameter	Value	Explanation
Tone Receive Expression	OFF, ON	For each rhythm tone, specify whether MIDI Expression messages will be received (ON), or not (OFF).
Tone Receive Hold-1	OFF, ON	For each rhythm tone, specify whether MIDI Hold-1 messages will be received (ON), or not (OFF). * *If "NO-SUS" is selected for Env Mode parameter, this setting will have no effect.*
Tone Receive Pan Mode	CONTINUOUS, KEY-ON	For each rhythm tone, specify how pan messages will be received. **CONTINUOUS:** Whenever Pan messages are received, the stereo position of the tone will be changed. **KEY-ON:** The pan of the tone will be changed only when the next note is played. If a pan message is received while a note is sounding, the panning will not change until the next key is pressed. * *The channels cannot be set so as not to receive Pan messages.*

Parameter Group [F2 (WG)] Modifying Waveforms/Pitch/Pitch Envelope

[F1 (WG PRM)]

Parameter	Value	Explanation
Wave Group	INT, EXP, SAMP, MSAM	Group containing the waveforms comprising the rhythm tone **INT:** Waveforms stored in internal **EXP:** Waveform stored in a Wave Expansion Board (SRX series) installed in EXP slots **SAMP:** Sample waveforms **MSAM:** Multisample waveforms
Wave Bank	PRST, USER, CARD	When the Wave Group is SAMP: PRST, USER, CARD When the Wave Group is MSAM: USER, CARD
Wave No. L (Mono) Wave No. R	----, 1–1228	Waves comprising the rhythm tone (The upper limit will depend on the wave group.) When in monaural mode, only the left side (L) is specified. When in stereo, the right side (R) is also specified. If you want to select a left/right pair of Waves, select the left (L) Wave number, and then hold down [SHIFT] and press [F4 (STEREO)] to add a check mark (✔); the right (R) (Wave) will be recalled. * *When using a multisample in stereo, you must specify the same number for L and R.*
Wave Gain	-6, 0, +6, +12	Gain (amplification) of the waveform The value changes in 6 dB (decibel) steps—an increase of 6 dB doubles the waveform's gain.
Wave Tempo Sync	OFF, ON	When you wish to synchronize a Phrase Loop to the clock (tempo), set this to "ON." * *This is valid only when a separately sold wave expansion board is installed, and a waveform that indicates a tempo (BPM) is selected as the sample for a tone.* If a waveform from a wave expansion board is selected for the tone, turning the Wave Tempo Sync parameter "ON" will cause pitch-related settings (p. 60) and FXM-related settings (p. 59) to be ignored. • If a sample is selected for a tone, you must first set the BPM (tempo) parameter of the sample. • If a sample is selected for a tone, Wave Tempo Sync will require twice the normal number of voices.

Phrase Loop

Phrase loop refers to the repeated playback of a phrase that's been pulled out of a song (e.g., by using a sampler). One technique involving the use of Phrase Loops is the excerpting of a Phrase from a pre-existing song in a certain genre, for example dance music, and then creating a new song with that Phrase used as the basic motif. This is referred to as "Break Beats."

Realtime Time Stretch

If the wave group is "SAMP" or "MSAM," and the Wave Tempo Sync parameter is turned "ON," you can vary the playback speed of the waveform without affecting the pitch.

Parameter	Value	Explanation
FXM Switch	OFF, ON	This sets whether FXM will be used (ON) or not (OFF).
FXM Color	1–4	How FXM will perform frequency modulation Higher settings result in a grainier sound, while lower settings result in a more metallic sound.
FXM Depth	0–16	Depth of the modulation produced by FXM

FXM

FXM (Frequency Cross Modulation) uses a specified waveform to apply frequency modulation to the currently selected waveform, creating complex overtones. This is useful for creating dramatic sounds or sound effects.

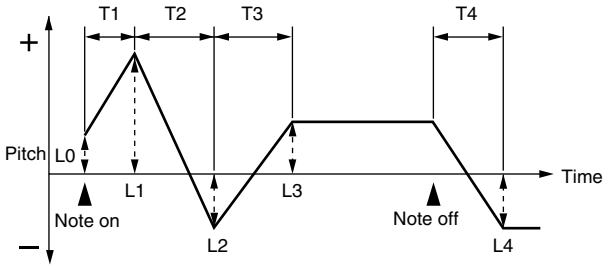
[F2 (PITCH)]

Parameter	Value	Explanation
Tone Coarse Tune	0 (C -)– 127 (G9)	Pitch at which a rhythm tone sounds Set the coarse tuning for Waves comprising the rhythm tones with the Wave Coarse Tune parameter (p. 61).
Tone Fine Tune	-50– +50	Pitch of the rhythm tone's sound (in 1-cent steps; one cent is 1/100th of a semitone) Set the fine tuning for Waves comprising the rhythm tones with the Wave Fine Tune parameter (p. 61).
Tone Random Pitch Depth	0–1200	Width of random pitch deviation that will occur each time a key is pressed (in 1-cent steps) If you do not want the pitch to change randomly, set this to "0."

[F3 (PCH ENV)]

Parameter	Value	Explanation
P-Env Depth	-12– +12	Depth of the Pitch Envelope Higher settings will cause the pitch envelope to produce greater change. Negative (-) settings will invert the shape of the envelope.
P-Env V-Sens	-63– +63	Keyboard playing dynamics can be used to control the depth of the pitch envelope. If you want the pitch envelope to have more effect for strongly played notes, set this parameter to a positive (+) value.
P-Env T1 V-Sens	-63– +63	This allows keyboard dynamics to affect the T1 of the Pitch envelope. If you want T1 to be speeded up for strongly played notes, set this parameter to a positive (+) value.
P-Env T4 V-Sens	-63– +63	Use this parameter when you want key release speed to affect the T4 value of the Pitch envelope. If you want T4 to be speeded up for quickly released notes, set this parameter to a positive (+) value.
P-Env Time 1–4	0–127	Pitch envelope times (T1–T4) Higher settings will result in a longer time until the next pitch is reached.
P-Env Level 0–4	-63– +63	Pitch envelope levels (L0–L4) Specify how the pitch will change at each point, relative to the pitch set with Coarse Tune or Fine Tune.

Pitch Envelope



Parameter Group [F3 (WAVE MIX)]

[F1 (LV/PAN)]

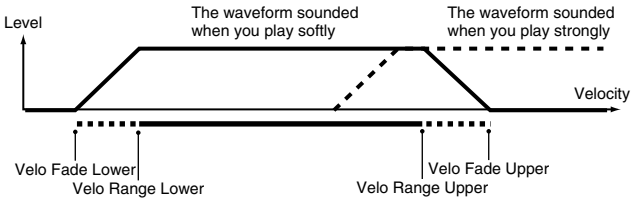
Parameter	Value	Description
Wave Level	0–127	Volume of the waveform
Wave Pan	L64–0–63R	Left/right position of the waveform
Wave Rnd Pan Sw	OFF, ON	Use this setting to cause the waveform's panning to change randomly each time a key is pressed (ON) or not (OFF). * *The range of the panning change is set by the Random Pan Depth parameter (p. 64).*
Wave Alter Pan Sw	OFF, ON, REVS	This setting causes panning of the waveform to be alternated between left and right each time a key is pressed. Set this to "ON" to pan the wave according to the Alternate Pan Depth parameter (p. 64) settings, or to "REVS" when you want the panning reversed.

[F2 (TUNE)]

Parameter	Value	Explanation
Wave Coarse Tune	-48– +48	Pitch of the waveform's sound (in semitones, +/-4 octaves)
Wave Fine Tune	-50– +50	Pitch of the waveform's sound (in 1-cent steps; one cent is 1/100th of a semitone)

[F3 (VEL RNG)]

You can use the force with which keys are played to control the way each waveform is played.



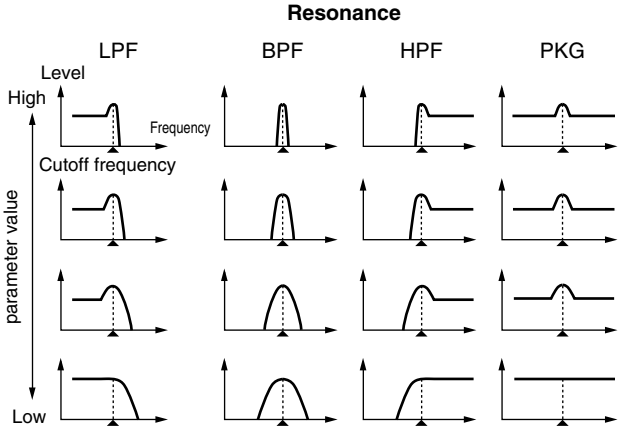
Parameter	Value	Explanation
Velocity Control	OFF, ON, RAN	Determines whether a different waveform is played (ON) or not (OFF) depending on the force with which the key is played (velocity). **RAN:** The rhythm tone's constituent waveforms will sound randomly, regardless of any Velocity messages.
Velo Fade Lower	0–127	Determines what will happen to the waveform's level when the rhythm tone is played at a velocity lower than Velo Range Lower. If you don't want the waveform to sound at all, set this parameter to "0."
Velo Range Lower	1–UPPER	Specifies the lowest velocity at which the waveform will sound.
Velo Range Upper	LOWER–127	Specifies the highest velocity at which the waveform will sound.
Velo Fade Upper	0–127	Determines what will happen to the waveform's level when the rhythm tone is played at a velocity greater than Velo Range Upper. If you don't want the waveform to sound at all, set this parameter to "0."

Parameter Group [F4 (TVF)]
Modifying the Brightness of a Sound with a Filter (TVF/TVF Envelope)

A filter cuts or boosts a specific frequency region to change a sound's brightness, thickness, or other qualities.

[F1 (TVF PRM)]

Parameter	Value	Explanation
Filter Type	OFF, LPF, BPF, HPF, PKG, LPF2, LPF3	Type of filter **OFF:** No filter is used. **LPF:** Low Pass Filter. This reduces the volume of all frequencies above the cutoff frequency in order to round off, or un-brighten the sound. **BPF:** Band Pass Filter. This leaves only the frequencies in the region of the cutoff frequency, and cuts the rest. This can be useful when creating distinctive sounds. **HPF:** High Pass Filter. This cuts the frequencies in the region below the cutoff frequency. This is suitable for creating percussive sounds emphasizing their higher tones. **PKG:** Peaking Filter. This emphasizes the frequencies in the region of the cutoff frequency. You can use this to create wah-wah effects by employing an LFO to change the cutoff frequency cyclically. **LPF2:** Low Pass Filter 2. Although frequency components above the Cutoff frequency are cut, the sensitivity of this filter is half that of the LPF. This filter is good for use with simulated instrument sounds such as the acoustic piano. **LPF3:** Low Pass Filter 3. Although frequency components above the Cutoff frequency are cut, the sensitivity of this filter changes according to the Cutoff frequency. While this filter is also good for use with simulated acoustic instrument sounds, the nuance it exhibits differs from that of the LPF2, even with the same TVF Envelope settings. * *If you set "LPF2" or "LPF3," the setting for the Resonance parameter will be ignored.*
Cutoff Frequency	0–127	Frequency at which the filter begins to have an effect on the waveform's frequency components
Resonance	0–127	Emphasizes the portion of the sound in the region of the cutoff frequency, adding character to the sound. * *Excessively high settings can produce oscillation, causing the sound to distort.*

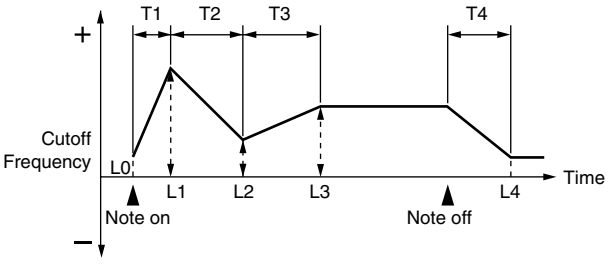


Parameter	Value	Explanation
Cutoff V-Curve	FIX, 1–7	Curve that determines how keyboard playing dynamics (velocity) will affect the cutoff frequency Set this to "FIX" if you don't want the Cutoff frequency to be affected by the keyboard velocity. 
Cutoff V-Sens	-63– +63	Use this parameter when changing the cutoff frequency to be applied as a result of changes in playing velocity. If you want strongly played notes to raise the cutoff frequency, set this parameter to positive (+) settings.
Resonance V-Sens	-63– +63	This allows keyboard velocity to modify the amount of Resonance. If you want strongly played notes to have a greater Resonance effect, set this parameter to positive (+) settings.

[F2 (TVF ENV)]

Parameter	Value	Explanation
F-Env Depth	-63– +63	Depth of the TVF envelope Higher settings will cause the TVF envelope to produce greater change. Negative (-) settings will invert the shape of the envelope.
F-Env V-Curve	FIX, 1–7	Curve that determines how keyboard playing dynamics (velocity) will affect the TVF envelope Set this to "FIX" if you don't want the TVF Envelope to be affected by the keyboard velocity. 
F-Env V-Sens	-63– +63	Specifies how keyboard playing dynamics will affect the depth of the TVF envelope. Positive (+) settings will cause the TVF envelope to have a greater effect for strongly played notes, and negative (-) settings will cause the effect to be less.
F-Env T1 V-Sens	-63– +63	This allows keyboard dynamics to affect the T1 of the TVF envelope. If you want T1 to be speeded up for strongly played notes, set this parameter to a positive (+) value.
F-Env T4 V-Sens	-63– +63	Use this parameter when you want key release speed to affect the T4 value of the TVF envelope. If you want T4 to be speeded up for quickly released notes, set this parameter to a positive (+) value.
F-Env Time 1–4	0–127	TVF envelope times (T1–T4) Higher settings will lengthen the time until the next cutoff frequency level is reached.
F-Env Level 0–4	0–127	TVF envelope levels (L0–L4) Specify how the cutoff frequency will change at each point, relative to the Cutoff Frequency value.

TVF Envelope



Parameter Group [F5 (TVA)]
Adjusting the Volume (TVA/TVA Envelope)

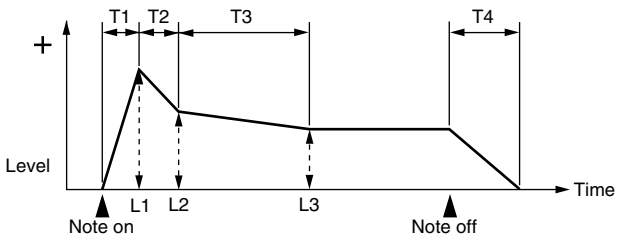
[F1 (TVA PRM)]

Parameter	Value	Explanation
Tone Level	0–127	Volume of the tone This setting is useful primarily for adjusting the volume balance between tones.
Level V-Curve	FIX, 1–7	Curve that determines how keyboard playing dynamics (velocity) will affect the volume Set this to "FIX" if you don't want the volume of the tone to be affected by the keyboard velocity. 
Level V-Sens	-63– +63	Set this when you want the volume of the tone to change depending on keyboard playing dynamics. Set this to a positive (+) value to have the changes in tone volume increase the more forcefully the keys are played; to make the tone play more softly as you play harder, set this to a negative (-) value.
Tone Pan	L64–0–63R	Left/right position of the tone
Random Pan Depth	0–63	Use this parameter when you want the stereo location to change randomly each time you press a key. Higher settings will produce a greater amount of change.
Alternate Pan Depth	L63–0–63R	This setting causes panning to be alternated between left and right each time a key is pressed. Higher settings will produce a greater amount of change. "L" or "R" settings will reverse the order in which the pan will alternate between left and right. For example if two rhythm tones are set to "L" and "R" respectively, the panning of the two rhythm tones will alternate each time they are played.

[F2 (TVA ENV)]

Parameter	Value	Explanation
A-Env T1 V-Sens	-63– +63	This allows keyboard dynamics to affect the T1 of the TVA envelope. If you want Time 1 to be speeded up for strongly played notes, set this parameter to a positive (+) value. If you want it to be slowed down, set this to a negative (-) value.
A-Env T4 V-Sens	-63– +63	Use this parameter when you want key release speed to affect the T4 value of the TVA envelope. If you want T4 to be speeded up for quickly released notes, set this parameter to a positive (+) value. If you want it to be slowed down, set this to a negative (-) value.
A-Env Time 1–4	0–127	TVA envelope times (T1–T4) Higher settings will lengthen the time until the next volume level is reached.
A-Env Level 1–3	0–127	TVA envelope levels (L1–L3) Specify how the volume will change at each point, relative to the Tone Level value.

TVA Envelope



Parameter Group [F6 (OUTPUT)] Output Settings

Parameter	Value	Explanation
Rhythm Out Assign	MFX, A, B, 1–4, TONE	Specifies for each rhythm set how the direct sound will be output. **MFX:** Output in stereo through multi-effects. You can also apply chorus or reverb to the sound that passes through multi-effects. **A, B:** Output to the OUTPUT A (MIX) jacks or OUTPUT B jacks in stereo without passing through multi-effects. **1–4:** Output to the INDIVIDUAL 1–4 jacks in mono without passing through multi-effects. **TONE:** Outputs according to the settings for each rhythm tone. * *If you've made settings so that sounds are separately routed to the INDIVIDUAL 1 jack and INDIVIDUAL 2 jack, but no plug is actually inserted in the INDIVIDUAL 2 jack, the sounds routed to INDIVIDUAL 1 and INDIVIDUAL 2 will be mixed and output from the INDIVIDUAL 1 jack.* * *If the Mix/Parallel parameter is set to "MIX," all sounds are output from the OUTPUT A (MIX) jacks in stereo (p. 194).*
Tone Out Assign	MFX, A, B, 1–4	Specifies how the direct sound of each rhythm tone will be output. **MFX:** Output in stereo through multi-effects. You can also apply chorus or reverb to the sound that passes through multi-effects. **A, B:** Output to the OUTPUT A (MIX) jacks or OUTPUT B jacks in stereo without passing through multi-effects. **1–4:** Output to the INDIVIDUAL 1–4 jacks in mono without passing through multi-effects. * *If the Rhythm Out Assign is set to anything other than "TONE," these settings will be ignored.* * *If you've made settings so that sounds are separately routed to the INDIVIDUAL 1 jack and INDIVIDUAL 2 jack, but no plug is actually inserted in the INDIVIDUAL 2 jack, the sounds routed to INDIVIDUAL 1 and INDIVIDUAL 2 will be mixed and output from the INDIVIDUAL 1 jack.* * *If the Mix/Parallel parameter is set to "MIX," all sounds are output from the OUTPUT A (MIX) jacks in stereo (p. 194).* * *If you've set Tone Out Assign to "MFX," set the MFX Output Assign parameter (p. 159) to specify the output destination of the sound that has passed through the multi-effects.* * *Sounds are output to chorus and reverb in mono at all times.* * *The output destination of the signal after passing through the chorus is set with the Chorus Output Select and Chorus Output Assign parameters (p. 159).* * *The output destination of the signal after passing through the reverb is set with the Reverb Output Assign parameter (p. 159).*
Tone Out Level	0–127	Level of the signal that is sent to the output destination specified by Tone Output Assign
Send Level (Output = MFX)		
Tone Chorus Send	0–127	Level of the signal sent to chorus for each rhythm tone if the tone is sent through MFX
Tone Reverb Send	0–127	Level of the signal sent to reverb for each rhythm tone if the tone is sent through MFX
Send Level (Output = non MFX)		
Tone Chorus Send	0–127	Level of the signal sent to chorus for each rhythm tone if the tone is not sent through MFX
Tone Reverb Send	0–127	Level of the signal sent to reverb for each rhythm tone if the tone is not sent through MFX

Setting Effects for a Patch (Effects/MFX/MFX Control/Chorus/Reverb)

For details regarding effect settings, refer to the pages shown below.

- **Making Effect Settings** (p. 157)
- **Making Multi-Effects Settings (MFX1–3)** (p. 162)
- **Making Chorus Settings** (p. 189)
- **Making Reverb Settings** (p. 190)

Playing in Performance Mode

A performance contains settings that apply to each individual part, such as the patch (rhythm set) assigned to each part, and its volume and pan.

Broadly speaking, Performance mode consists of two screens: LAYER screen and MIXER screen.

Use the LAYER screen when you want to combine multiple sounds (patches or rhythm sets) to create complex sounds. This lets you play patches together ("layer") or play different patches in separate areas of the keyboard ("split").

Use the MIXER screen when you want to mix the sounds by adjusting the level and pan for each of 16 parts.

When you play the keyboard, you will hear the current part and the parts whose keyboard switch is set to "ON."

In addition to the settings of each part, the following settings can also be stored for each performance.

- Controller settings such as the D Beam, realtime control knobs, assignable switches, and pads
- Arpeggio and chord memory settings
- Rhythm group number

Displaying PERFORM LAYER Screen

1. Press PERFORMANCE [LAYER/SPLIT].

You will enter Performance mode, and the PERFORM LAYER screen appears.

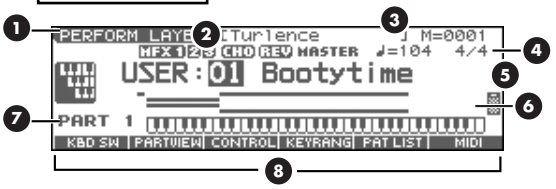
Displaying PERFORM MIXER Screen

1. Press PERFORMANCE [MIXER].

You will enter Performance mode, and the PERFORM MIXER screen appears.

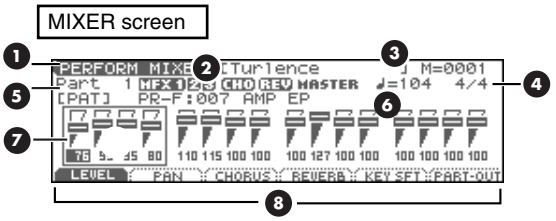
Functions in the PERFORMANCE LAYER/ MIXER Screen

LAYER screen



1. Indicates the current sound generating mode.
2. Indicates multi-effects (MFX1, 2, 3), chorus (CHO), reverb (REV), and masterring (MASTER) on and off.
3. Indicates the name of the currently selected song, the measure location.
4. Indicates the time signature, and the tempo.
5. Indicates/selects the group, number, and name of the selected performance.
6. Indicates the key range in which you can play the keyboard or play rhythm sets.
7. Indicates the current part.
8. Jumps to the setting screen of the displayed parameter.

MIXER screen



1. Indicates the current sound generating mode.
2. Indicates multi-effects (MFX1, 2, 3), chorus (CHO), reverb (REV), and masterring (MASTER) on and off.
3. Indicates the name of the currently selected song, the measure location.
4. Indicates the time signature, and the tempo.
5. Indicates/selects the current part.
6. Indicates/selects the patch assigned to the current part.
7. Set the volume (LEVEL), pan (PAN), chorus (CHORUS), reverb (REVERB), Part Course Tune (KEY SFT), Keyboard Sw (KBD), Pad Part (PAD), Arpeggio Part (ARP), Output Assign (OUT) of the part.
8. Jumps to the setting screen of the displayed parameter.

Selecting a Performance

The Fantom-Xa has two performance groups, including the User group and Preset groups, with each group storing 64 performances, for a total of 128 performances.

USER

This is the group inside the Fantom-Xa which can be rewritten. Performances you yourself create can be stored in this group. The Fantom-Xa contains 64 preset performances.

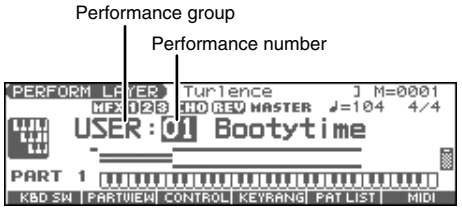
PRST (Preset)

This is the group inside the Fantom-Xa which cannot be rewritten. However you may modify the settings of the currently selected performance, and then store the modified performance in User memory. The Fantom-Xa contains 64 preset performances.

CARD (Memory Card)

This group lets you use patches stored on a memory card inserted in the rear panel PC card slot. Since the data in this group can be rewritten, you can use this group to store patches that you create.

1. **Press [LAYER/SPLIT].**
2. **Press [CURSOR] to move the cursor to the performance group.**



3. **Use the VALUE dial, or [INC] [DEC] to select a performance group.**
4. **Press [CURSOR] to move the cursor to the performance number.**
5. **Use the VALUE dial or [INC] [DEC] to select the performance number.**

Selecting Performances from the List

You can display a list of performances and select a performance from that list.

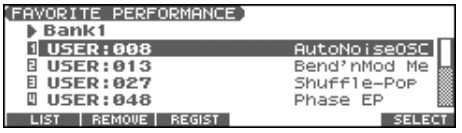
1. **Press [LAYER/SPLIT].**
2. **Press [ENTER].**
   The PERFORMANCE LIST screen appears.

3. **To switch the performance group, press ◀ or ▶.**
4. **Use the VALUE dial, [INC] [DEC], or ▲ ▼ to select the performance.**
5. **Press [ENTER] to close the PERFORMANCE LIST screen.**

Selecting Favorite Performances

You can bring together your favorite and most frequently used performances in one place by registering them in the Favorite Performance. By using this function you can quickly select your favorite performances.

1. **Press [LAYER/SPLIT].**
2. **Press [ENTER] and then press [F1 (FAVORIT)].**
   The FAVORITE PERFORMANCE screen appears.



3. **Use the VALUE dial, [INC] [DEC], or ▲ ▼ to select a performance number.**
   To switch banks, press ◀ ▶.
4. **Press [ENTER] to select the performance.**

Registering a Favorite Performance

You can register a total of 64 Performances (8 sounds x 8 banks) as favorite Performance.

1. **Select the Performance that you wish to register.**
2. **Press [ENTER] and then press [F1 (FAVORIT)].**
   The FAVORITE PERFORMANCE screen appears.
3. **Press ◀ ▶ to select the bank in which you wish to register the Performance.**
4. **Use the VALUE dial, [INC] [DEC], or ▲ ▼ to select the number to which you wish to register.**
5. **Press [F3 (REGIST)] to execute the registration.**

* *To cancel, press [EXIT].*

MEMO

By pressing [F2 (REMOVE)] you can cancel the Performance registration that is selected in the FAVORITE PERFORM screen.

Using the LAYER Screen

Selecting a Part

The currently selected part is called the "current part."

1. From the PERFORM LAYER screen, use ▲ or ▼ to select the part.

MEMO

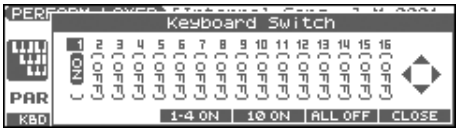
You can also select the part by pressing [SELECT] to make it light and pressing PART/TRACK [1]–[8].

* *To select parts 9–16, press [9-16] to make it light, and then press PART/TRACK [1]–[8].*

Selecting the Part that You want to Sound (Keyboard Switch)

Here's how to select the parts whose patch or rhythm set will sound.

1. From the PERFORM LAYER screen, Press [F1 (KBD SW)].
The Keyboard Switch window appears.



2. Press ◀ or ▶ to select the part you want to sound.

3. Use the VALUE dial, [INC] [DEC], or ▲ ▼ to select "ON" or "OFF."
When you play the keyboard, you will hear the current part and the parts whose keyboard switch is set to "ON."

4. Press [F6 (CLOSE)] to return to the previous screen.

About the keyboard switch

Use the keyboard switch when you want to play multiple sounds layered together (Layer) or assign different sounds to different regions of the keyboard (Split). Conversely, you can turn off all keyboard switches when you are creating data, etc.

Selecting the Sound for a Part

It's easy to switch the patch assigned to a part.

1. Select the part whose sound you want to switch.

2. Press [F5 (PAT LIST)].
The PATCH LIST screen appears.

- If you press [F1 (FAVORIT)], the FAVORITE PATCH screen (p. 31) appears.
- If you press [F2 (CATEG)], you can select patches by category (p. 32).

3. Press ◀ ▶ to select the performance group.

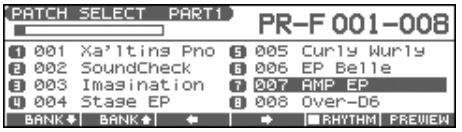
4. Use the VALUE dial, [INC] [DEC], or ▲ ▼ to select a patch.

5. Press [ENTER] to select the patch.

Using the PATCH SELECT screen

1. Select the part whose sound you want to switch.

2. Press [PATCH SELECT].
The PATCH SELECT screen appears.



3. To select a rhythm set, press [F5 (RHYTHM)] to add a check mark (✓).
If you add a mark, the RHYTHM SELECT screen appears.

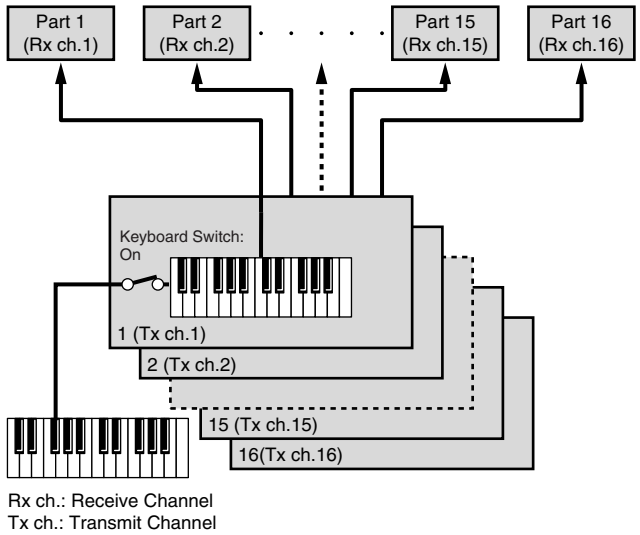
4. Press [F1] or [F2] to select a group.

5. Use [F3], [F4], PART/TRACK [1]–[8], [INC] [DEC], ▲ ▼, or the VALUE dial to select a patch/rhythm set.

6. Press [ENTER] to return to the PERFORM LAYER screen.

Combining and Playing Sounds Together (Layer)

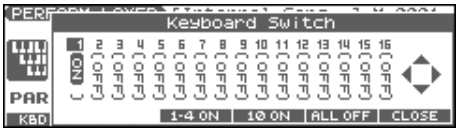
In Performance mode you can play the sounds of all parts whose Keyboard Switch is on, and all connected parts. Combining the parts will produce, thicker, fatter sounds.



Rx ch.: Receive Channel
Tx ch.: Transmit Channel

1. Press [LAYER/SPLIT] to access the PERFORM LAYER screen.

2. Press [F1 (KBD SW)].
The Keyboard Switch window appears.



3. Press ◀ or ▶ to select the part you want to sound.

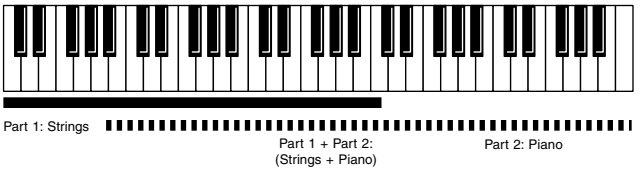
4. Use the VALUE dial, [INC] [DEC], or ▲ ▼ to select "ON."
When you play the keyboard, you will hear the current part and the parts whose keyboard switch is set to "ON."

5. Repeat steps 3–4 to turn the Keyboard Switch on for all parts that are connected to the parts you want to play.

6. Press [F6 (CLOSE)] to return to the PERFORM LAYER screen.

Playing Different Sounds in Different Areas of the Keyboard (Split)

In Performance mode you can divide the keyboard and play a different patch in each area (this is called "split"). As the note range that plays each part can be specified individually, you can split the keyboard into a maximum of 16 sections.
For instance, you can play strings in the lower range, piano in the upper range, and both sounds in the middle range.



MEMO

A split performance is one application of a layer. Changing the key range of each part in the layer results in a split.

1. Press [LAYER/SPLIT] to access the PERFORM LAYER screen.

2. Press [F4 (KEYRANG)].
The Key Range window appears.

3. Press ▲ or ▼ to select the part you want to play.

4. Press [F3 (KBDSW)]–[F5 (UPPER)] or ◀ ▶ to select the parameter.

5. Use the VALUE dial or [INC] [DEC] to change the setting.

Parameter	Value	Explanation
KbdSW	OFF, ON	Specifies whether or not the part will sound.
Lower	C - –Upper	Lower limit of the range
Upper	Lower–G9	Upper limit of the range

The bar shown above the keyboard indicates the range of keys that will sound.

6. When you are finished, press [F6 (CLOSE)] to return to the PERFORM LAYER screen, and begin playing.

TIP

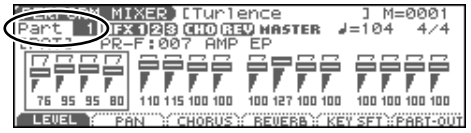
By specifying sections for different parts so that they overlap each other, you can combine two or more parts only in a specific section.

Using the MIXER Screen

Selecting a Part

The currently selected part is called the "current part."

1. In the PERFORM MIXER screen, press [CURSOR] to move the cursor to the Part number.



2. Use the VALUE dial or [INC] [DEC] to select the part.

MEMO

You can also select the part by pressing [SELECT] to make it light and pressing PART/TRACK [1]–[8].

* *To select parts 9–16, press [9-16] to make it light, and then press PART/TRACK [1]–[8].*

Selecting the Sound for a Part

You can switch the patch that is assigned to a part.

1. Select the part whose sound you want to switch.

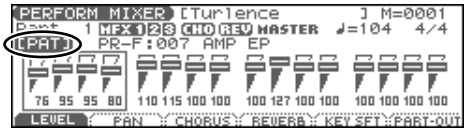
2. Press [CURSOR] to move the cursor to the patch number or patch group.

3. Use the VALUE dial or [INC] [DEC] to select a patch.

Selecting the Rhythm Set

1. Select a part.

2. Press [CURSOR] to move the cursor to the following location.



3. Use the VALUE dial or [INC] [DEC] to select "RHY."

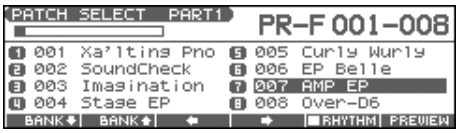
The rhythm set will be selected.

Using the PATCH SELECT screen

1. Select the part whose sound you want to switch.

2. Press [PATCH SELECT].

The PATCH SELECT screen appears.



3. To select a rhythm set, press [F5 (RHYTHM)] to add a check mark (✔).

If you add a mark, the RHYTHM SELECT screen appears.

4. Press [F1] or [F2] to select a group.

5. Use [F3], [F4], PART/TRACK [1]–[8], [INC] [DEC], ▲ ▼, or the VALUE dial to select a patch/rhythm set.

6. Press [ENTER] to return to the PERFORM LAYER screen.

Editing the Part Settings

In the PERFORM MIXER screen you can set the following parameters for each part.

1. Press [MIXER].

The PERFORM MIXER screen appears.

2. Press [F1 (LEVEL)]–[F6 (PART-OUT)] to select the parameter.

3. Press [CURSOR] to select the part.

4. Use the VALUE dial or [INC] [DEC] to change the setting.

Parameter (Function Button)		Explanation
[F1 (LEVEL)]		Volume of each part (Level, p. 73)
[F2 (PAN)]		Left/right position of each part (Pan, p. 73)
[F3 (CHORUS)]		Level of the signal sent to chorus for each part (Chorus, p. 74)
[F4 (REVERB)]		Level of the signal sent to reverb for each part (Reverb, p. 74)
[F5 (KEY SFT)]		Pitch of the part's sound (in semi-tones, +/-4 octaves) (Coarse, p. 74)
[F6 (PART-OUT)]	KBD	Keyboard Switch (p. 68)
	PAD	Pad Part (p. 117)
	ARP	Arpeggio Part (p. 88)
	OUT	Output Assign (Asgn, p. 74)

Silencing the Playback of a Specific Part (Mute)

When playing along with a song, you can turn off (i.e., mute) parts you don't want to hear. This allows you to turn off the melody part for karaoke applications or for practicing the muted part.

1. **In Performance mode, press [MUTE].**
   [MUTE] lights.

2. **Press PART/TRACK [1]–[8] to turn the corresponding part off so that its indicator lights.**
   If you want to turn off part 9–16, press [9-16] to make its indicator light, and press PART/TRACK [1]–[8].

3. **To turn on the part, press PART/TRACK [1]–[8] you pressed in step 2 once again so the indicator goes dark.**

   MEMO

   This setting is linked with the Mute parameter (PART VIEW screen), and can be saved as a performance setting.

* *Part Mute does not turn off the MIDI receive switch; rather, it sets the volume to the minimum setting to silence the sound. Therefore, MIDI messages are still received.*

Creating a Performance

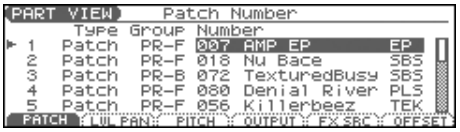
With the Fantom-Xa, you have total control over a wide variety of settings. Each item that can be set is known as a **parameter**. When you change the values of parameters, you are doing what is referred to as **Editing**. This chapter explains the procedures used in creating Performances, and the functions of the Performance parameters.

Adjusting the Parameters of Each Part

In Performance mode you can view the part settings as a list. This is called the "PART VIEW" screen. In this screen you can view a list that shows settings for five parts at once, such as the patch assigned to each part, and its volume and pan settings. You can also edit these settings here, and make detailed settings that cannot be made in the PERFORM LAYER screen, or PERFORM MIXER screen.

1. Access the PERFORM LAYER screen.

2. Press [F2 (PARTVIEW)].
The PART VIEW screen will appear.



3. Press ▲ ▼ to select the part.

4. Press [PAGE], [F1]–[F6], and/or ◀ ▶ to select the parameter.
The name of the parameter at the cursor location is displayed in the top line of the PART VIEW screen.

5. Use the VALUE dial or [INC] [DEC] to change the value.

6. When you have finished editing, press [EXIT] to return to the PERFORM LAYER screen.

If you return to the PERFORM LAYER screen without saving, an "*" will be displayed at the left of the performance group.

NOTE

If you turn off the power or select a different sound while the display indicates "*," your edited rhythm set will be lost.

Initializing Performance Settings

"Initialize" means to return the settings of the currently selected sound to a standard set of values.

* *The Initialize operation will affect only the currently selected sound; the sounds that are stored in user memory will not be affected. If you wish to restore all of the Fantom-Xa's settings to their factory values, perform a Factory Reset (p. 203).*

1. Press [LAYER/SPLIT] to access the PERFORM LAYER screen.

2. Select the Performance that you want to initialize (p. 67).

3. Hold down [SHIFT] and press [F6 (INIT)].
The Performance Initialize window appears.

4. Press ▲ ▼ to select the initialization type.

Default: Resets the currently selected performance in the Temporary memory to the standard values. Use this setting when you wish to create a sound from scratch.

Sound Control: Initializes the values of the following part parameters. Cutoff Offset, Resonance Offset, Attack Time Offset, Release Time Offset, Decay Time Offset, Vibrato Rate, Vibrato, Depth, Vibrato Delay

5. Press [F6 (SELECT)].
A message will ask you for confirmation.

6. Press [F6 (EXEC)].
The initialization will be carried out.

* *To cancel, press [F5 (CANCEL)].*

Changing the Settings of the Patch Assigned to a Part

When using patches in Performance mode, some settings such as effects settings will be affected by Performance settings. If you wish to edit a patch while hearing how it will sound in the Performance, use this procedure:

* *Here we explain how to change the setting of a patch assigned to a part. The procedure for changing the settings of rhythm sets is the same. Substitute "rhythm set" wherever "patch" appears in a sentence.*

1. Make sure the Performance mode is selected.

2. Press [PATCH EDIT].
The patch assigned to the part is displayed in the PATCH EDIT screen.

3. The rest of the procedure is the same as when making changes in Patch mode (p. 35).

Saving a Performance You've Created (Write)

Changes you make to sound settings are temporary, and will be lost if you turn off the power or select another sound. If you want to keep the modified sound, you must save it in the internal USER group (user memory) or CARD group (memory card).
When you edit the settings of a Performance, an "*" will appear in the PERFORM LAYER screen.

NOTE

When you perform the save procedure, the data that previously occupied the save destination will be lost.

1. Make sure that the performance you wish to save is selected.

2. Press [WRITE].
The WRITE MENU screen appears.

3. Press [F1 (PERF)].

* *Alternatively, you can use ▲ or ▼ to select "Performance," and then press [ENTER].*

The PERFORMANCE NAME screen appears.

4. Assign a name to the performance.

cf.

For details on assigning names, refer to **Assigning a Name** (p. 28).

5. When you have finished inputting the name, press [F6 (WRITE)].
A screen will appear, allowing you to select the write-destination performance.

6. Use the VALUE dial, [INC] [DEC], or ▲ ▼ and [F1 (USER)] [F2 (CARD)] to select the write destination and rhythm set number.

7. Press [F6 (WRITE)].
A message will ask you for confirmation.

8. Press [F6 (EXEC)] to execute the save operation.

* *To cancel, press [F5 (CANCEL)].*

NOTE

Never switch off the Fantom-Xa while data is being saved.

When Changing the Settings for the Patch or Rhythm Set Assigned to a Part in a Performance

If you've edited a patch or rhythm set assigned to a part in a performance and then try to save the performance without first saving the edited patch or rhythm set, the following message appears.

In such cases, first save the patches and rhythm sets, and then save the performance.

Functions of Parameters of Each Part (Performance Parameters)

[F1 (PATCH)]

Parameter	Value	Explanation
Type	Patch, Rhythm	Sets the assignment of a patch (Patch) or rhythm set (Rhythm) to each of the parts.
Group	USER, PR-A–F, GM, CARD, EXP	Selects the group to which the desired patch or rhythm set belongs. **USER:** User **PR-A–F:** Preset A–F **GM:** GM (GM2) **CARD:** Card **EXP:** Wave Expansion Board
Number	001–****	Selects the desired patch or rhythm set by its number.

* *When the cursor is at a Type, Group, or Number, you can press [ENTER] to open the PATCH LIST screen and choose a patch from the list (p. 30).*

[F2 (LVL PAN)]

Parameter	Value	Explanation
Level	0–127	Volume of each part This setting's main purpose is to adjust the volume balance between parts.
Pan	L64–0–63R	Left/right position of each part
Kbd	OFF, ON (✔)	Specifies, for each part, whether or not the keyboard controller section will be connected to the internal sound generator.
Solo	OFF, ON (✔)	Check "✔" this setting if you want to hear the part by itself; this is called "soloing" the part.
Mute	OFF, ON (✔)	Mutes (✔) or un-mutes (OFF) each part. Use this setting when, for example, you want to use the instrument for karaoke by muting the part playing the melody, or when you want to play something using a separate sound module. * *The Mute Switch parameter does not turn the part off, but sets the volume to minimum so that no sound is heard. Therefore, MIDI messages are still received.*

[F3 (PITCH)]

Parameter	Value	Explanation
Octave	-3– +3	Pitch of the part's sound (in 1-octave units) Note that when a rhythm set is assigned to a part, you cannot modify this parameter.
Coarse	-48– +48	Pitch of the part's sound (in semitones, +/-4 octaves)
Fine	-50– +50	Pitch of the part's sound (in 1-cent steps; one cent is 1/100th of a semitone)
Bend	0–24, PAT	Amount of pitch change in semitones (2 octaves) that will occur when the Pitch Bend Lever is moved. The amount of change when the lever is tilted is set to the same value for both left and right sides. If you want to use the Pitch Bend Range setting of the patch assigned to the part (p. 41), set this to "PAT."

Coarse Tune and Octave Shift

The Coarse Tune and Fine Tune parameters, along with the Octave Shift parameter, can all be seen as doing the same thing to the sound, i.e., changing the pitch of the sound. For example, if C4 (Middle C) is played with the Coarse Tune parameter set to "+12," the note produced is C5 (one octave above C4). For example, if C4 (Middle C) is played with the Octave Shift parameter set to "+1," the note produced is C5 (one octave above C4).

However, internally these function very differently. When the Coarse Tune parameter is set to "+12," the pitch itself is raised one octave. On the other hand, when the Octave Shift parameter is set to "+1," it is the same as pressing the keys one octave up. In other words, use the Coarse Tune parameter when changing the pitch, and the Octave Shift parameter when you want to shift the entire keyboard, for example, when the number of keys is insufficient.

[F4 (OUTPUT)]

Parameter	Value	Explanation
Asgn	MFX 1–3, A, B, 1–4, PAT 1–3	Specifies for each part how the direct sound will be output. **MFX 1–3:** Output in stereo through multi-effects. You can also apply chorus or reverb to the sound that passes through multi-effects. Specify which multi-effects (1–3) will be used. **A, B:** Output to the OUTPUT A (MIX) jack or OUTPUT B jack in stereo without passing through multi-effects. **1–4:** Output to the INDIVIDUAL 1-4 jacks in mono without passing through multi-effects. **PAT 1–3:** The part's output destination is determined by the settings of the patch or rhythm set assigned to the part. Specify which multi-effects (1–3) will be used. * *If you've made settings so that sounds are separately routed to the INDIVIDUAL 1 jack and INDIVIDUAL 2 jack, but no plug is actually inserted in the INDIVIDUAL 2 jack, the sounds routed to INDIVIDUAL 1 and INDIVIDUAL 2 will be mixed and output from the INDIVIDUAL 1 jack.* * *If the Mix/Parallel parameter is set to "MIX," all sounds are output from the OUTPUT A (MIX) jacks in stereo (p. 194).* * *If you've set Tone Out Assign to "MFX," set the MFX Output Assign parameter to specify the output destination of the sound that has passed through the multi-effects.* • Chorus and reverb are output in mono at all times. • The output destination of the signal after passing through the chorus is set with the Chorus Output Select and Chorus Output Assign parameters (p. 161). • The output destination of the signal after passing through the reverb is set with the Reverb Output Assign parameter (p. 161).
Output	0–127	Level of the signal that is sent to the output destination specified by Part Output Assign
Chorus	0–127	Level of the signal sent to chorus for each part
Reverb	0–127	Level of the signal sent to reverb for each part

[F5 (FX SRC)]

Parameter	Value	Explanation
MFX1–3	OFF, ON (✔)	The settings of a specific patch can be used as the settings for MFX1–MFX3, chorus, and reverb. This setting specifies the part to which this patch has been assigned. If no part is selected, the settings of the Performance will be used.
Chorus		
Reverb		

[F6 (OFFSET)]

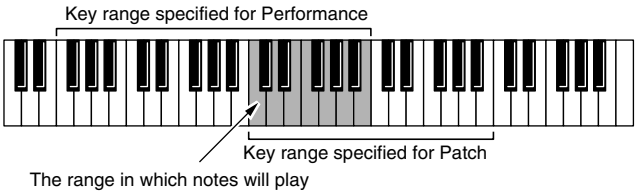
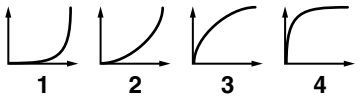
Parameter	Value	Explanation
Cutoff	-64– +63	Adjusts the cutoff frequency for the patch or rhythm set assigned to a part.
Reso	-64– +63	Adjusts the Resonance for the patch or rhythm set assigned to a part.

Parameter	Value	Explanation
Attack	-64– +63	Adjusts the TVA/TVF Envelope Attack Time for the patch or rhythm set assigned to a part.
Releas	-64– +63	Adjusts the TVA/TVF Envelope Release Time for the patch or rhythm set assigned to a part.
Decay	-64– +63	Adjusts the TVA/TVF Envelope Decay Time for the patch or rhythm set assigned to a part.

[PAGE] - [F1 (VIBRATO)]

Parameter	Value	Explanation
Vib Rate	-64– +63	For each part, adjust the vibrato speed.
Depth	-64– +63	For each part, this adjusts the depth of the vibrato effect.
Delay	-64– +63	For each part, this adjusts the time delay until the vibrato.
Phase	OFF, ON	Set to "ON" when you want to suppress discrepancies in timing of parts played on the same MIDI channel. * *When this parameter is set to "ON," parts on the same MIDI channel are put in a condition in which their timing is matched, enabling them to be played at the same time. Accordingly, a certain amount of time may elapse between reception of the Note messages and playing of the sounds. Turn this setting to "ON" only as needed.*

[PAGE] - [F2 (KEYBORD)]

Parameter	Value	Explanation
Kbd	OFF, ON (✔)	Specifies, for each part, whether or not the keyboard controller section will be connected to the internal sound generator.
K.L	C - –(Upper)	Lowest note that the tone will sound for each part.
K.U	(Lower)–G9	Highest note that the tone will sound for each part When the Key Range (p. 42) is set for each individual tone in a patch, sounds are produced in the range where the Key Range of each tone and the Key Range for the part overlap. 
Velo	-63– +63	Changes the volume and cutoff frequency for each part according to the velocity with which the keys are pressed. If you want strongly played notes to raise the volume/cutoff frequency, set this parameter to positive (+) settings. If you want strongly played notes to lower the volume/cutoff frequency, use negative (-) settings. Set Velocity Sensitivity to "0" when you want sounds played at a fixed volume and cutoff frequency, regardless of the force with which the keys are played.
Curve	OFF, 1–4	Selects for each MIDI channel one of the four following Velocity Curve types that best matches the touch of the connected MIDI keyboard. Set this to "OFF" if you are using the MIDI keyboard's own velocity curve. 
Voice	0–63, FUL	This setting specifies the number of voices that will be reserved for each part when more than 128 voices are played simultaneously. * *It is not possible for the settings of all parts to total an amount greater than 64. The remaining number of available voices will be displayed at (rest=). Pay attention to this readout as you make Voice Reserve settings.*

Calculating the Number of Voices Being Used

The Fantom-Xa is able to play up to 128 notes simultaneously. The polyphony, or the number of voices (sounds) does not refer only to the number of sounds actually being played, but changes according to the number of tones used in the patches, and the number of Waves used in the tones. The following method is used to calculate the number of sounds used for one patch being played.

(Number of Sounds Being Played) x (Number of Tones Used by Patches Being Played) x (Number of Waves Used in the Tones)

Realtime Stretch requires twice the normal polyphony.

[PAGE] - [F3 (KEY MOD)]

Parameter	Value	Explanation
Mono/Poly	MONO, POLY, PAT	Set this parameter to "MONO" when the patch assigned to the part is to be played monophonically, or to "POLY" when the patch is to be played polyphonically. If you want to use the Mono/Poly setting of the patch assigned to the part (p. 41), set this to "PAT." * *This setting is ignored for parts to which a rhythm set is assigned.*
Legato	OFF, ON, PAT	You can add legato when performing monophonically. The term "legato" refers to a playing style in which notes are smoothly connected to create a flowing feel. This creates a smooth transition between notes, which is effective when you wish to simulate the hammering-on and pulling-off techniques used by a guitarist. Turn this parameter "ON" when you want to use the Legato feature and "OFF" when you don't. If you want to use the Legato Switch setting of the patch assigned to the part (p. 41), set this to "PAT." * *This setting is ignored for parts to which a rhythm set is assigned.*
Portament	OFF, ON, PAT	Specify whether portamento will be applied. Turn this parameter "ON" when you want to apply Portamento and "OFF" when you don't. If you want to use the Portamento Switch setting of the patch assigned to the part (p. 41), set this to "PAT."
Time	0–127, PAT	When portamento is used, this specifies the time over which the pitch will change. Higher settings will cause the pitch change to the next note to take more time. If you want to use the Portamento Time setting of the patch assigned to the part (p. 41), set this to "PAT." * *This setting is ignored for parts to which a rhythm set is assigned.*

[PAGE] - [F4 (S.TUNE1)] [F5 (S.TUNE2)]

Parameter	Value	Explanation
Part Scale Tune for C–B	-64– +63	Make scale tune settings for each part. Scale Tune is switched on/off by means of the Scale Tune Switch parameter (p. 194).

Equal Temperament

This tuning divides the octave into 12 equal parts, and is the most widely used method of temperament used in Western music. The Fantom-Xa employs equal temperament when the Scale Tune Switch is set to "OFF."

Just Temperament (Tonic of C)

Compared with equal temperament, the principle triads sound pure in this tuning. However, this effect is achieved only in one key, and the triads will become ambiguous if you transpose.

Arabian Scale

In this scale, E and B are a quarter note lower and C#, F# and G# are a quarter-note higher compared to equal temperament. The intervals between G and B, C and E, F and G#, Bb and C#, and Eb and F# have a natural third-the interval between a major third and a minor third. On the Fantom-Xa, you can use Arabian temperament in the three keys of G, C and F.

<Example>

Note name	Equal temperament	Just Temperament (tonic C)	Arabian Scale
C	0	0	-6
C#	0	-8	+45
D	0	+4	-2
Eb	0	+16	-12
E	0	-14	-51
F	0	-2	-8
F#	0	-10	+43
G	0	+2	-4
G#	0	+14	+47
A	0	-16	0
Bb	0	+14	-10
B	0	-12	-49

[PAGE] - [F6 (EXT)]

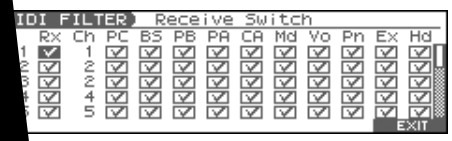
Parameter	Value	Explanation
Bank Sel (MSB)	0–127, OFF	If you want a Bank Select number MSB (controller number 0) to also be transmitted when you switch Performances, specify the value that you want to transmit (0–127) for each part. If you do not want this message to be transmitted, set this to "OFF." * *The data of the part for which the Keyboard Switch is turned off will not be transmitted.*
Bank Sel (LSB)	0–127	If you want a Bank Select number LSB (controller number 32) to also be transmitted when you switch Performances, specify the value that you want to transmit (0–127) for each part. The data of the part for which the Keyboard Switch is turned off will not be transmitted.
Prog	1–128, OFF	If you want a Program Change number to also be transmitted when you switch Performances, specify the value that you want to transmit (0–128) for each part. If you do not want this message to be transmitted, set this to "OFF." * *The data of the part for which the Keyboard Switch is turned off will not be transmitted.*
Level	0–127, OFF	If you want Volume messages to also be transmitted when you select a Performance, specify the desired value (0–127) for the part. If you do not want this message to be transmitted, set this to "OFF." * *The data of the part for which the Keyboard Switch is turned off will not be transmitted.*
Pan	L64–0–63R, OFF	If you want Pan messages to also be transmitted when you select a Performance, specify the desired value (L64–0–63R) for the part. If you do not want this message to be transmitted, set this to "OFF." * *These messages will not be transmitted by parts whose Keyboard Switch is turned off.*

IDI Settings

Access the PERFORM LAYER screen, and select the Performance ... sett... wish to modify (p. 67).

ress [F6 (MIDI)].

he MIDI FILTER screen appears.



eter	Value	Explanation
	OFF, ON (✔)	For each part, spe... ner MIDI ... will be received (ON), or not (OFF). If this is "OFF," ... will not re... ormally, you should leave this "ON," b... can turn it "OF... you do not ... ecific part to be playing during song.
	1–16	MIDI receive ch... each part
ram Change)	OFF, ON (✔)	For each MIDI ... pecify wheth... messages will be received (ON... F).
Select)		
Bend)		
honic Key Pressure)		
el Pressure)		
ation)		
)		
n)		

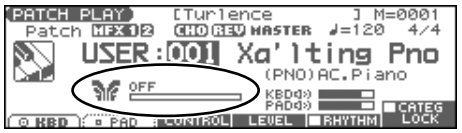
Modifying the Sound in Real Time

You can use the D Beam controller, realtime controllers, assignable switches or a pedal to modify the sound while you perform.
Here we will explain the procedures and settings for using these functions in Patch mode. The operations are the same in Performance mode.

D Beam Controller

The **D Beam controller** can be used simply by waving your hand over it. It can be used to apply various effects, depending on the function that is assigned to it. You can also create effects in which the sound changes instantaneously, in a way that would not be possible by operating a knob or the bender lever. On the Fantom-Xa, the D Beam controller can be used not only to modify the sounds assigned to the Keyboard part or Pad part, but also to control the pitch of a monophonic (solo) synthesizer sound.

1. Access the Patch Play screen (p. 29).
The following area of the screen is the D Beam controller display area.



2. Press either the D BEAM [PAD TRIGGER], [SOLO SYNTH], or [ASSIGNABLE] button to turn on the D Beam controller.

[PAD TRIGGER]: Use the D Beam controller to play sounds instead of striking the pads.

[SOLO SYNTH]: Lets you use the D Beam as a monophonic synthesizer.

[ASSIGNABLE]: Operates the function assigned to the D Beam controller.

3. While you play the keyboard or pads to produce sound, place your hand above the D Beam controller and move it slowly up and down.
An effect will be applied to the sound, depending on the function that is assigned to the D Beam controller.

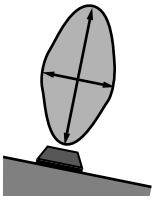
4. To turn off the D Beam controller, once again press the button you pressed in step 2 so the indicator goes out.

MEMO

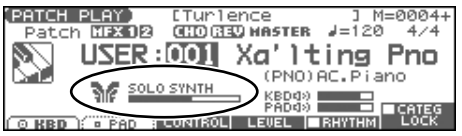
If Performance mode is selected, the D Beam controller on/off setting is saved for each performance as part of the performance settings.

The usable range of the D Beam controller

The following diagram shows the usable range of the D Beam controller. Waving your hand outside this range will produce no effect.



The response of the D Beam Controller can also be checked in the "D Beam" area of the display. This is displayed graphically as a bar that lengthens as you move your hand closer, and shortens as you move your hand away.



NOTE

The usable range of the D Beam controller will become extremely small when used under strong direct sunlight. Please be aware of this when using the D Beam controller outside.

NOTE

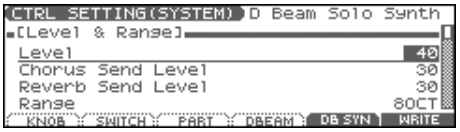
The sensitivity of the D Beam controller will change depending on the amount of light in the vicinity of the unit. If it does not function as you expect, adjust the D Beam Sens parameter as appropriate for the brightness of your location. Increase this value will raise the sensitivity (p. 201).

Solo Synth

On the Fantom-Xa you can play a monophonic synthesizer whose pitch is controlled by the D Beam.

1. Hold down [SHIFT] and press D BEAM [SOLO SYNTH].

A screen like the following appears.



2. Press ▲ ▼ to select the parameter.

3. Use the VALUE dial or [INC] [DEC] to make the setting.

4. If you want to save the settings, press [F6 (WRITE)].

5. Press [EXIT] to return to the previous screen.

MEMO

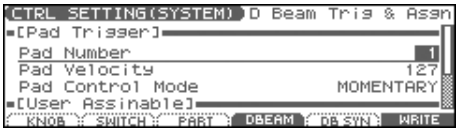
Setting for the Solo Synth are saved for system settings.

Parameter	Value	Explanation
Level & Range		
Level	0–127	Sets the volume.
Chorus Send Level	0–127	Level of the signal sent to chorus
Reverb Send Level	0–127	Level of the signal sent to reverb
Range	2OCT, 4OCT, 8OCT	Range in which the pitch of the solo synth will vary
Osc1		
Osc 1 Waveform	SAW, SQR	Waveform **SAW:** Sawtooth wave **SQR:** Square wave
Osc 1 Pulse Width	0–127	Pulse width of the waveform By cyclically modifying the pulse width you can create subtle changes in the tone. * *The Pulse Width is activated when "SQR" is selected with OSC1/2 waveform.*
Osc 1 Coarse Tune	-48– +48	Pitch of the tone's sound (in semitones, +/-4 octaves)
Osc 1 Fine Tune	-50– +50	Pitch of the tone's sound (in 1-cent steps)
Osc2 & Sync		
Osc 2 Waveform	(same as Osc 1)	
Osc 2 Pulse Width		
Osc 2 Coarse Tune		
Osc 2 Fine Tune		
Osc 2 Level	0–127	Adjust the level.
Osc Sync Switch	OFF, ON	Turning this switch on produces a complex sound with many harmonics. This is effective when the OSC1 pitch is higher than the OSC2 pitch.
Filter		
Filter Type	OFF, LPF, BPF, HPF, PKG	Type of filter **OFF:** No filter is used. **LPF:** Low Pass Filter. This reduces the volume of all frequencies above the cutoff frequency (Cutoff) in order to round off, or un-brighten the sound. **BPF:** Band Pass Filter. This leaves only the frequencies in the region of the cutoff frequency, and cuts the rest. **HPF:** High Pass Filter. This cuts the frequencies in the region below the cutoff frequency. **PKG:** Peaking Filter. This emphasizes the frequencies in the region of the cutoff frequency.
Cutoff	0–127	Frequency at which the filter begins to have an effect on the waveform's frequency components
Resonance	0–127	Emphasizes the portion of the sound in the region of the cutoff frequency, adding character to the sound. Excessively high settings can produce oscillation, causing the sound to distort.
LFO		
LFO Rate	0–127	Modulation speed of the LFO
LFO Osc 1 Pitch Depth	-63– +63	Depth to which the LFO will modulate the Osc 1 pitch
LFO Osc 2 Pitch Depth	-63– +63	Depth to which the LFO will modulate the Osc 2 pitch
LFO Osc 1 Pulse Width Depth	-63– +63	Depth to which the LFO will modulate the pulse width of the Osc 1 waveform * *The Pulse Width is activated when "SQR" is selected with Osc 1 waveform.*
LFO Osc 2 Pulse Width Depth	-63– +63	Depth to which the LFO will modulate the pulse width of the Osc 2 waveform * *The Pulse Width is activated when "SQR" is selected with Osc 2 waveform.*

Pad Trigger

You can use the D Beam controller to control the pads as an alternative to striking the pads themselves.

1. Hold down [SHIFT] and press D BEAM [PAD TRIGGER].
A screen like the following appears.



2. Press ▲ ▼ to select the parameter.

3. Use the VALUE dial or [INC] [DEC] to make the setting.

4. Press [EXIT] to return to the previous screen.

MEMO

PAD trigger settings are saved independently for each performance as part of the performance settings. This lets you create performances that make effective use of controller settings.

MEMO

If Patch mode is selected, this is saved as part of the system settings. If you want to save the settings, press [F6 (WRITE)].

Parameter	Value	Explanation
Pad Number	1–9	Pad number affected by the D Beam
Pad Velocity	1–127	Strength of the pad sound played by the D Beam controller
Pad Control Mode	MOMENTARY, LATCH	Specifies how the D Beam will behave when it is obstructed. **MOMENTARY:** The parameter will be on only while the D Beam is obstructed, and will turn off when you stop obstructing it. **LATCH:** The parameter will alternately be switched on/off each time you obstruct the D Beam.

Assignable

You can assign various functions to the D Beam controller and apply a wide range of effects to the sound in real time.

1. Hold down [SHIFT] and press D BEAM [ASSIGNABLE].
A screen like the following appears.

2. Press ▲ ▼ to select the parameter.

3. Use the VALUE dial or [INC] [DEC] to make the setting.

4. Press [EXIT] to return to the previous screen.

MEMO

The settings for the ASSIGNABLE are saved independently for each performance as part of the performance settings. This lets you create performances that make effective use of controller settings.

MEMO

If Patch mode is selected, this is saved as part of the system settings. If you want to save the settings, press [F6 (WRITE)].

Parameter	Value	Explanation
Type	CC01–31, 33–95, BEND UP, BEND DOWN, START/STOP, TAP TEMPO, ARP GRID, ARP DURATION, ARP MOTIF, ARP OCTAVE UP, ARP OCTAVE DOWN	Function controlled by the D Beam controller **CC01–31, 33–95:** Controller numbers 1–31, 33–95 **BEND UP:** Controls the pitch as specified by the "Pitch Bend Range Up" setting (p. 41). **BEND DOWN:** Controls the pitch as specified by the "Pitch Bend Range Down" setting (p. 41). **START/STOP:** Starts/Stops the sequencer. **TAP TEMPO:** Tap tempo (a tempo specified by the interval at which you move your hand over the D Beam controller). **ARP GRID:** Arpeggio Grid **ARP DURATION:** Duration of each arpeggiated note **ARP MOTIF:** Arpeggio Motif **ARP OCTAVE UP:** The range in which the arpeggio is sounded will rise in steps of an octave (maximum 3 octaves). **ARP OCTAVE DOWN:** The range in which the arpeggio is sounded will lower in steps of an octave (maximum 3 octaves).
Range Min	0–127	Lower limit of the range of the D Beam controller
Range Max	0–127	Upper limit of the range of the D Beam controller. By setting Range Max below Range Min you can invert the range of change.

Realtime Controller

You can use the REALTIME CONTROL knobs and ASSIGNABLE SW buttons to modify the sound in real time.

1. Access the Patch Play screen (p. 29).

2. You can select the function of the knobs by pressing the button located at the right of the REALTIME CONTROL knobs.

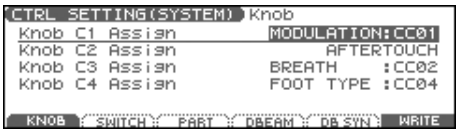
- **When the FILTER/ENV indicator is lit**
  Turning the knobs will control Cutoff, Resonance, Attack, and Release.
- **When the ARP/RHY indicator is lit**
  Turning the knobs will control the arpeggio parameters Range and Accent, and the rhythm parameters Accent Rate and Tempo.
- **When the ASSIGNABLE indicator is lit**
  Turning the knobs will control the assigned parameters. You can freely assign parameters.

* *If the indicators are unlit, turning the knobs will not control any parameters.*

3. While playing the keyboard or pressing the pads to produce sound, operate the REALTIME CONTROL knobs and ASSIGNABLE SW buttons.
The sound will change according to the function assigned to each knob or button.

REALTIME CONTROL Knob Settings

1. Hold down [SHIFT] and turn one of the REALTIME CONTROL knobs.
A screen like the following appears.



2. Press ▲ ▼ to select the parameter.

3. Use the VALUE dial or [INC] [DEC] to make the setting.

4. If you want to save the settings, press [F6 (WRITE)].

5. Press [EXIT] to return to the previous screen.

MEMO

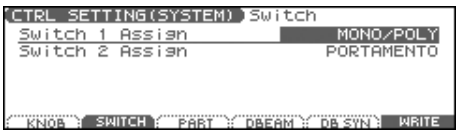
Realtime controller settings are saved independently for each performance as part of the performance settings. This lets you create performances that make effective use of controller settings.

Parameter	Value	Explanation
Knob C1–4 Assign	CC01–31, 33–95, PITCH BEND, AFTERTOUCH, ARP STYLE, ARP GRID, ARP DURATION, ARP MOTIF, CHORD FORM, MASTER LEVEL	Functions that will be controlled by the REALTIME CONTROL knobs **CC01–31, 33–95:** Controller numbers 1–31, 33–95 **PITCH BEND:** Pitch Bend **AFTERTOUCH:** Aftertouch **ARP STYLE:** Arpeggio Style **ARP GRID:** Arpeggio Grid **ARP DURATION:** Duration of each arpeggiated note **ARP MOTIF:** Arpeggio Motif **CHORD FORM:** Chord form of the Chord Memory function **MASTER LEVEL:** The volume of the entire Fantom-Xa

ASSIGNABLE Switch Settings

1. Hold down [SHIFT] and press one of the ASSIGNABLE SW button.

A screen like the following appears.



2. Press ▲ ▼ to select the parameter.

3. Use the VALUE dial or [INC] [DEC] to make the setting.

4. If you want to save the settings, press [F6 (WRITE)].

5. Press [EXIT] to return to the previous screen.

MEMO

Realtime controller settings are saved independently for each performance as part of the performance settings. This lets you create performances that make effective use of controller settings.

MEMO

If Patch mode is selected, assignable switches are available when the keyboard part is selected.

Parameter	Value	Explanation
Switch 1/2 Assign	TRANSPOSE DOWN, TRANSPOSE UP, TAP TEMPO, MONO/POLY, PORTAMENTO, HOLD, MFX1–3, CHORUS SW, REVERB SW, MASTERING SW, LOOP, RHY START/STOP	Functions that will be controlled by the [1]/[2] buttons **TRANSPOSE DOWN:** Lowers the key range in semitones (up to 5 semitones lower). **TRANSPOSE UP:** Raises the key range in semitones (up to 6 semitones higher). **TAP TEMPO:** Tap tempo (a tempo specified by the interval at which you press the button) **MONO/POLY:** Pressed to toggle between polyphonic (POLY) and monophonic (MONO) play of a patch. **PORTAMENTO:** Portamento On/Off **HOLD:** Hold play On/Off **MFX1–3 SW:** Multi-effect 1–3 switch **CHORUS SW:** Chorus switch **REVERB SW:** Reverb switch **MASTERING SW:** Mastering switch **LOOP:** Loop play On/Off **RHY START/STOP:** Rhythm pattern playback On/Off

Control Pedal

You can modify the sound by pressing a pedal that is connected to the rear panel PEDAL HOLD jack or PEDAL CONTROL jack.

Pedal such as expression pedals (EV-5; available separately), pedal switches (DP series; available separately), or foot switches (BOSS FS-U; available separately) can be connected to the Fantom-Xa.

1. **Access the Patch Play screen (p. 29).**
2. **While playing the keyboard to produce sound, operate a pedal.**
   The sound will change according to the function that is assigned to the control pedal.

Control Pedal Settings

1. **Press [MENU].**
2. **Press ▲ ▼ to select "1. System," and then press [ENTER].**
   The System Menu window appears.

3. **Press [F2 (KBD/CTRL)], and then press [F2 (PDL BND)].**
   A screen like the following appears.

4. **Press ▲ ▼ to select the parameter.**
5. **Use the VALUE dial or [INC] [DEC] to make the setting.**
6. **If you want to save the settings, press [F6 (WRITE)].**
7. **Press [EXIT] to return to the previous screen.**

Parameter	Value	Explanation
Control Pedal Assign	CC01–31, 33–95, BEND UP, BEND DOWN, AFTERTOUCH, OCT UP, OCT DOWN, START/STOP, PUNCH IN/OUT, TAP TEMPO, PROG UP, PROG DOWN, FAVORITE UP, FAVORITE DOWN, ARP SW, RHY START/STOP, CHORD SW, LOOP	Function of the pedal connected to the PEDAL CONTROL jack **CC01–31, 33–95:** Controller numbers 1–31, 33–95 **BEND UP:** Controls the pitch as specified by the "Pitch Bend Range Up" setting (p. 41). **BEND DOWN:** Controls the pitch as specified by the "Pitch Bend Range Down" setting (p. 41). **AFTERTOUCH:** Aftertouch **OCT UP:** Pedal press raises the key range in octave steps (up to 3 octaves higher). **OCT DOWN:** Pedal press lowers the key range in octave steps (up to 3 octaves lower). **START/STOP:** The sequencer will start/stop. **PUNCH IN/OUT:** Manual punch-in/out recording will start/stop. **TAP TEMPO:** Tap tempo (a tempo specified by the interval at which you press the pedal). **PROG UP:** The next sound number will be selected. **PROG DOWN:** The previous sound number will be selected. **FAVORITE UP:** The favorite patch/performance of the next number or bank will be selected. **FAVORITE DOWN:** The favorite patch/performance of the previous number or bank will be selected. **ARP SW:** Arpeggio/Rhythm function on/off **RHY START/STOP:** Rhythm pattern playback on/off **CHORD SW:** Switches the Chord function on/off. **LOOP:** Loop play On/Off
Control Pedal Polarity Hold Pedal Polarity	STANDARD, REVERSE	Polarity of the pedal On some pedals, the electrical signal output by the pedal when it is pressed or released is the opposite of other pedals. If your pedal has an effect opposite of what you expect, set this parameter to "REVERSE." If you are using a Roland pedal (that has no polarity switch), set this parameter to "STANDARD."
Continuous Hold Pedal	OFF, ON	Determines whether the HOLD PEDAL jack will provide support for half-pedaling (ON), or not (OFF). When this is set to "ON," you can then connect an optional damper pedal (DP-8, etc.), and employ pedal work to achieve even finer control in performances in which piano tones are used.

Playing Arpeggios

The Fantom-Xa's Arpeggio function lets you produce arpeggios automatically; simply hold down some keys, and a corresponding arpeggio will be played automatically.
Not only can you use the factory-set

Holding an Arpeggio

By using the following procedure, you can produce arpeggios even without continuing to press the keyboard.

1. **Press [ARPEGGIO] to turn on the arpeggio.**
2. **Press [HOLD].**
   The indicator will light.
3. **Play a chord on the keyboard.**
4. **If you play a different chord or notes while the arpeggio is being held, the arpeggio will change accordingly.**
5. **To cancel Arpeggio Hold, press [HOLD] once again.**

When Using a Hold Pedal

If you play an arpeggio while pressing the hold pedal, the arpeggio will continue to be played even if you release the chord.

1. **Connect an optional pedal switch (DP series etc.) to the HOLD PEDAL jack.**
2. **Press [ARPEGGIO] to turn on the arpeggio.**
3. **Play a chord while pressing the hold pedal.**
4. **If you play a different chord or notes while the arpeggio is being held, the arpeggio will change accordingly.**

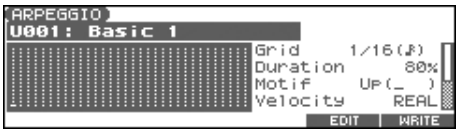
Playing Arpeggios Along with the Sequencer

When using arpeggios while the sequencer is playing, or when you want to record arpeggios into the sequencer in real time, you can synchronize the arpeggio with the start/stop timing of the sequencer.

For details, refer to **Arp/Rhythm Sync Switch** (p. 200).

Arpeggio Settings

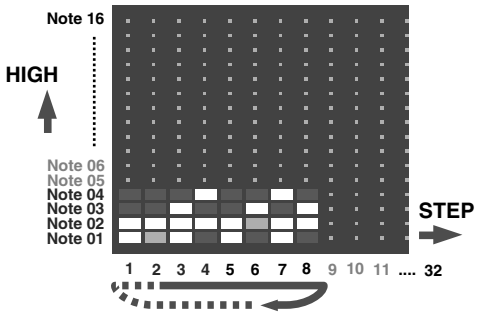
1. **Hold down [SHIFT] and press [ARPEGGIO].**
   The ARPEGGIO screen appears.



2. **Press ▲ ▼ to select the parameter.**
3. **Use the VALUE dial or [INC] [DEC] to make the setting.**
4. **When you have made the setting, press [EXIT].**

About Arpeggio Styles

An Arpeggio Style is a series of data for basic arpeggio patterns and chord styles recorded in the form of a grid consisting of a maximum of 32 steps x 16 pitches.



Each grid contains one of the following kinds of data.

- **ON:** Note On (with Velocity data)
- **TIE:** Tie (hold of the previous note)
- **REST:** Rest (no sound played)

The keys that are pressed along with the sequence in which they are pressed is referenced to the "lowest-pitched key during input." Thus, you can use a single Arpeggio Style in different Patches and Performances at the same time.

A Arpeggio Style is not part of any patch or Performance, but rather independent data; you can store up to 64 Arpeggio Styles.

Parameter	Value	Explanation
(Arpeggio Style)	U001–128 (User), P001–128 (Preset)	This selects the arpeggio's basic performance Style. The arpeggio styles are kept in preset memory and user memory.
Grid	1/4, 1/8, 1/8L, 1/8H, 1/12, 1/16, 1/16L, 1/16H, 1/24	This sets the particular note division and resolution in a "single grid" used in creating the arpeggio in an Arpeggio Style, and how much of a "shuffle" syncopation is to be to applied (none/weak/strong) to it (grid type). **1/4:** Quarter note (one grid section = one beat) **1/8:** Eighth note (two grid sections = one beat) **1/8L:** Eighth note shuffle Light (two grid sections = one beat, with a light shuffle) **1/8H:** Eighth note shuffle Heavy (two grid sections = one beat, with a heavy shuffle) **1/12:** Eighth note triplet (three grid sections = one beat) **1/16:** Sixteenth note (four grid sections = one beat) **1/16L:** Sixteenth note shuffle Light (four grid sections = one beat, with a light shuffle) **1/16H:** Sixteenth note shuffle Heavy (four grid sections = one beat, with a heavy shuffle) **1/24:** Sixteenth note triplet (six grid sections = one beat) * *Grid settings are shared with the rhythm pattern.*
Duration	30–120%, Full	This determines whether the sounds are played staccato (short and clipped), or tenuto (fully drawn out). **30–120:** For example, when set to "30," the length of the note in a grid (or when a series of grids is connected with ties, the final grid) is 30% of the full length of the note set in the grid type. **Full:** Even if the linked grid is not connected with a tie, the same note continues to sound until the point at which the next new sound is specified. * *Duration settings are shared with the rhythm pattern.*
Motif	(See p. 89.)	Refer to **Selecting Ascending/Descending Variations (Arp Motif)** (p. 89).
Velocity	REAL, 1–127	Specifies the loudness of the notes that you play. **REAL:** If you want the velocity value of each note to depend on how strongly you play the keyboard, set this parameter to REAL. **1–127:** If you want each note to have a fixed velocity regardless of how strongly you play the keyboard, set this parameter to the desired value.
OctRange	-3– +3	This adds an effect that shifts arpeggios one cycle at a time in octave units (octave range). You can set the shift range upwards or downwards (up to three octaves up or down). * *You can also use a REALTIME CONTROL knob to control this.*
Accent	0–100	When you play arpeggios, the velocity of each arpeggiated note is determined by the velocity of the notes programmed within the arpeggio style. You can adjust the amount ("spread") of this dynamic variation. With a setting of "100," the arpeggiated notes will have the velocities that are programmed by the arpeggio style. With a setting of "0," all arpeggiated notes will be sounded at a fixed velocity. * *You can also use a REALTIME CONTROL knob to control this.*
Part (Displayed in Performance mode)	Part1–16	Here's how to specify the part that will use the arpeggio in Performance mode. You can specify only one part for playing arpeggios. If a rhythm set is assigned to a part in Performance mode, you can play a rhythm pattern along with the arpeggios. * *The part you select here functions for both the arpeggio and the chord memory functions.*

Selecting Ascending/Descending Variations (Arp Motif)

This selects the method used to play sounds (motif) when you have a greater number of notes than programmed for the Arpeggio Style.

* *When the number of keys played is less than the number of notes in the Style, the highest-pitched of the pressed keys is played by default.*

Value:

Up (L): Only the lowest of the keys pressed is sounded each time, and the notes play in order from the lowest of the pressed keys.

Up (L&H): Notes from both the lowest and highest pressed keys are sounded each time, and the notes play in order from the lowest of the pressed keys.

Up (_): The notes play in order from the lowest of the pressed keys. No one note is played every time.

Down (L): Only the lowest of the keys pressed is sounded each time, and the notes play in order from the highest of the pressed keys.

Down (L&H): Notes from both the lowest and highest pressed keys are sounded each time, and the notes play in order from the highest of the pressed keys.

Down (_): The notes play in order from the highest of the pressed keys. No note is played every time.

U/D (L): Notes will be sounded from the lowest to the highest key you press and then back down to the lowest key, with only the lowest key sounded each time.

U/D (L&H): Notes from both the lowest and highest pressed keys are sounded each time, and the notes play in order from the lowest of the pressed keys and then back again in the reverse order.

U/D (_): The notes play in order from the lowest of the pressed keys, and then back again in the reverse order. No note is played every time.

Rand (L): Notes will be sounded randomly for the keys you press, with only the lowest key sounded each time.

Rand (_): Only the lowest of the keys pressed is sounded each time, the notes you press will be sounded randomly. No note will sound each time.

Phrase: Pressing just one key will play a phrase based on the pitch of that key. If you press more than one key, the key you press last will be used.

<Example>

Action of a Style starting from the lowest note, "1-2-3-2" when the keys "**C**-D-E-F-**G**" are played

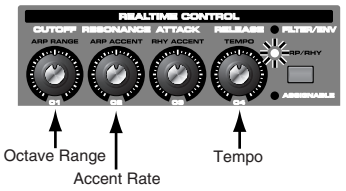
- When "UP (L)" is selected as the motif:
  C-D-E-D -> **C**-E-F-E -> **C**-F-G-F (-> repeated)
- When "UP (_)" is selected as the motif:
  C-D-E-D -> D-E-F-E -> E-F-G-F (-> repeated)
- When "UP&DOWN (L&H)" is selected as the motif:
  C-D-**G**-D -> **C**-E-**G**-E -> **C**-F-**G**-F -> **C**-E-**G**-E (-> repeated)

Using the Realtime Control Knobs to Edit the Arpeggio Settings

You can use the realtime control knobs to change the arpeggio settings by editing the parameters in real time.

1. Play arpeggios.

2. Press the REALTIME CONTROL button so the ARP/RHY indicator lights.



3. Turn the REALTIME CONTROL knobs.

While arpeggios are playing, you can use the knobs to control the following parameters.

- **OctRange** (p. 88)
- **Accent** (p. 88)
- **Tempo** (p. 86)

Creating an Arpeggio Style (Arpeggio Style Edit)

In addition to using the built-in arpeggio styles, you are free to create your own. After creating an original arpeggio style, you can store it in the internal user memory.
Broadly speaking, there are two ways to create an arpeggio style.

Step-recording

In this method, you use the keyboard and pads to step-record your arpeggio. Each time you input a note, you will advance to the next step. This method is convenient when you want to create an arpeggio from scratch using a Style that contains no data.

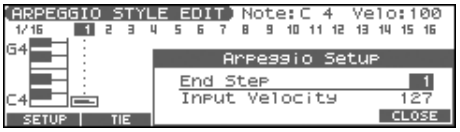
MEMO

If you want to create "from scratch," you'll need to initialize the Style. In the ARPEGGIO STYLE EDIT screen, hold down [SHIFT] and press [F4 (INIT)]. A message will ask whether you want to initialize; press [F6 (EXEC)] to execute initialization.

1. Hold down [SHIFT] and press [ARPEGGIO].

2. Press [F5 (EDIT)].
The ARPEGGIO STYLE EDIT screen appears.

3. Press [F1 (SETUP)].
The Arpeggio Setup window appears.



4. Press ▲ to move the cursor to "End Step."

5. Use the VALUE dial or [INC] [DEC] to specify the number of steps for the arpeggio style.

6. Press ▼ to move the cursor to "Input Velocity."

7. Use the VALUE dial or [INC] [DEC] to specify the velocity setting for the data you will input.
The data will always be input with the specified velocity.

8. Press [F6 (CLOSE)] to close the Arpeggio Setup window.

9. Press [F6 (STP REC)] to add a check mark (✔).
Now you're ready to step-record. Play the keyboard or pads to input notes.

- To move to the desired input location, press [CURSOR].
- To input notes, play the keyboard or pads.
- To input a tie, press [F2 (TIE)].
- To input a rest, press [F3 (REST)].
- To erase the note, hold down [SHIFT] and press [F6 (CLR NOTE)].
- To erase all notes at the current step, hold down [SHIFT] and press [F5 (CLR STEP)].
- You can press [F4 (PREVU)] to audition the style you've input.

MEMO

A maximum of sixteen note numbers (pitches) can be used in a single style.

10. When you have finished, press [F5 (EXIT)].

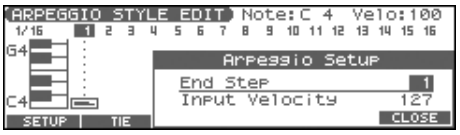
Using the VALUE Dial or [INC] [DEC] to Input Values

In this method, you'll use the cursor to specify the step or pitch that you want to input, and use the dial or [INC] [DEC] to input values. This method is convenient when you want to edit or modify previously input data.

1. **Hold down [SHIFT] and press [ARPEGGIO].**

2. **Press [F5 (EDIT)].**
   The ARPEGGIO STYLE EDIT screen appears.

3. **Press [F1 (SETUP)].**
   The Arpeggio Setup window appears.



4. **Press ▲ to move the cursor to "End Step."**

5. **Use the VALUE dial or [INC] [DEC] to specify the number of steps for the arpeggio style.**

6. **Press [F6 (CLOSE)] to close the Arpeggio Setup window.**

7. **Press [CURSOR] to specify the step or pitch you want to input.**

   * *When using this method of input, you can use the keyboard to specify the pitch of the note. (Unlike when step-recording, pressing the keyboard will not actually input the note.)*

8. **Input the velocity value, using either the VALUE dial or [INC] [DEC].**
   You can input a tie by turning VALUE all the way to the right (or using [INC] to raise the value all the way).

   - You can also input a tie by pressing [F2 (TIE)].
   - To input a rest, press [F3 (REST)].
   - You can press [F4 (PREVU)] to audition the style you've input.

   * *When using this method of input, you can use the pads to specify the velocity and finalize your input; after you've specified the step and pitch to be input, strike a pad to input it. (Higher-numbered pads produce higher velocity values; for example, striking pad 1 specifies a velocity value of 15, while striking pad 9 specifies a velocity value of 127.)*

   MEMO

   A maximum of sixteen note numbers (pitches) can be used in a single style.

9. **When you have finished, press [F5 (EXIT)].**

Saving the Styles You Have Created (Write)

The Styles you create are temporary; they are deleted as soon as you turn off the power or select some other Style. You can store 128 arpeggio styles in the User memory.

Arpeggio style settings are saved as independent data, not as part of the data for each patch. The settings in Patch mode, it is not possible to save arpeggio parameters (e.g., Arpeggio Style, Grid, Motif, Duration).
It can be saved to individual in Performance mode. If you want to save your settings, press [WRITE] and save the performance.

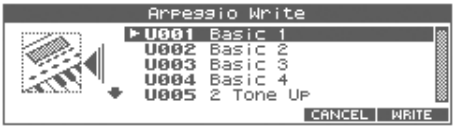
1. **In the ARPEGGIO screen, confirm that the current Style is the one you want to save.**

2. **Press [F6 (WRITE)].**
   The ARPEGGIO STYLE NAME screen appears.

3. **Assign a name to the Style.**

   cf.
   For details on assigning names, refer to p. 28.

4. **When you have finished inputting the name, press [F6 (WRITE)].**
   A screen will appear, allowing you to select the write-destination Style.



5. **Use the VALUE dial, [INC] [DEC], or ▲ ▼ to select the write destination.**

6. **Press [F6 (WRITE)].**
   A message will ask you for confirmation.

7. **To save the Style, press [F6 (EXEC)].**

   * *To cancel, press [F5 (CANCEL)].*

   NOTE

   Never switch off the Fantom-Xa while data is being saved.

Using the Chord Memory Function

About the Chord Memory Function

Chord Memory is a function that allows you to play chords based on pre-programmed **Chord Forms**, just by pressing a single key on the keyboard. The Fantom-Xa can store 64 preset chord forms and 64 user chord forms. If you wish, you can overwrite any of the 64 user (factory set) chord forms.

The chord memory function operates on the arpeggio part in Performance mode. If a rhythm set is selected for that part, you can also use this to play rhythms.

* *You cannot use the chord memory function with the pads.*

NOTE

When you use the Chord Memory function with a tone for which the Mono/Poly Parameters (p. 41) is Mono, only one sound in the chord is played. When using the Chord Memory function to turn Poly the Mono/Poly Parameters.

Using in Combination with the Arpeggio Function

When performing with the Chord Form function, you can also use it along with the Arpeggio function (p. 128). After first storing complex Chord Forms in memory, you can then call them up when Arpeggio is on, and you can easily create complex arpeggio sounds just by pressing a single key.

Performing with the Chord Memory Function

Turning Chord Memory Function On and Off

1. **Press [CHORD MEMORY] to turn it on.**
   The button will light.

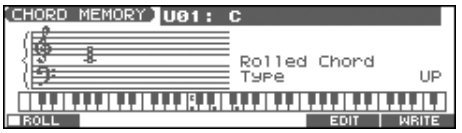
2. **Play the keyboard.**
   A chord will sound according to the currently selected chord form.
   When you press the C4 key (Middle C), the chord is played using the exact chord structure recorded in the Chord Form. This is referenced to the C4 key; parallel chords are played by pressing other keys.

3. **To finish playing chords, press [CHORD MEMORY] again to turn it off.**

Selecting Chord Forms

Changing the chord form will change the notes in the chord.

1. **Hold down [SHIFT] and press [CHORD MEMORY].**
   The CHORD MEMORY screen appears.



2. **Use the VALUE dial or [INC] [DEC] to select a Chord Form number.**
   U01–64: User
   P01–64: Preset
   The notes of the chord will be displayed.

3. **When you have finished selecting a Chord Form, press [EXIT].**

Sounding a chord in the order of its notes (Rolled Chord)

This causes the notes within a chord to be sounded consecutively, rather than simultaneously. Since the playback speed will change according to the force with which you play the keyboard, you can vary your playing dynamics to create a realistic simulation of playing a guitar.

1. **Hold down [SHIFT] and press [CHORD MEMORY].**
   The CHORD MEMORY screen appears.

2. **Press [F1 (ROLL)] to add a check mark (✔).**
   With this setting, the notes of the chord will be sounded consecutively when you play the keyboard.

Changing the order in which notes are sounded

You can change the order in which the notes of a chord are sounded.

1. **Hold down [SHIFT] and press [CHORD MEMORY].**
   The CHORD MEMORY screen appears.

2. **Press ▼ to move the cursor to "Rolled Chord Type."**

3. **Use the VALUE dial or [INC] [DEC] to change a value.**
   UP: Notes will be sounded in order from bottom to top.
   DOWN: Notes will be sounded in order from top to bottom.
   ALTERNATE: The order in which the notes are sounded will change each time you play the keyboard.

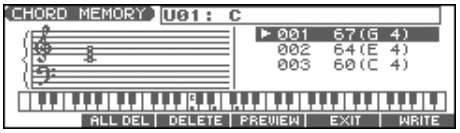
Creating Your Own Chord Forms

Not only can you use the prepared internal Chord Forms, which determine the constituent notes of chords played using the Chord Memory function, but you can also freely create and rewrite them as well.

1. Hold down [SHIFT] and press [CHORD MEMORY].
The CHORD MEMORY screen appears.

2. Use the VALUE dial or [INC] [DEC] to select a chord form.

3. Press [F5 (EDIT)].
A screen like the following appears.



4. Use the keyboard to input the chord that you want to play.
When you press a key, the note will be added in the screen.

- If you input a note by mistake, press [F3 (DELETE)]. You can also erase a note you input by pressing the same key.
- If you want to erase all notes, press [F2 (ALL DEL)].
- You can press [F4 (PREVIEW)] to hear the chord that you are inputting.

5. When you have finished, press [F5 (EXIT)].

Saving the Chord Forms You Have Created

The Chord Forms you create are temporary; they are deleted as soon as you turn off the power or select some other Chord Form. If you want to keep a Chord Form you have made, save it to the Fantom-Xa's user memory.

A chord form is not part of any patch or performance, but rather independent data. Therefore you can use a single chord form in different Patches and Performances.
In Performance mode you can save these settings individually for each performance. These settings cannot be saved in a patch. If you want to save your settings, press [WRITE] and save the performance.

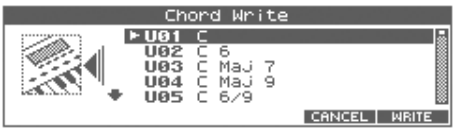
1. In the CHORD MEMORY screen, confirm that the current Chord Form is the one you want to save.

2. Press [F6 (WRITE)].
The CHORD NAME screen appears.

3. Assign a name to the Chord Form.

cf.
For details on assigning names, refer to p. 28.

4. When you have finished inputting the name, press [F6 (WRITE)].
A screen will appear, allowing you to select the write-destination Chord Form.



5. Use the VALUE dial, [INC] [DEC], or ▲ ▼ to select the write destination.

6. Press [F6 (WRITE)].
A message will ask you for confirmation.

7. To save the Chord Form, press [F6 (EXEC].

* *To cancel, press [F5 (CANCEL)].*

NOTE
Never switch off the Fantom-Xa while data is being saved.

Playing Rhythms

About Rhythm Patterns

The Fantom-Xa contains 256 preset rhythm patterns. You can play a variety of rhythm patterns simply by pressing the pads. In addition to using these built-in rhythm patterns, you can also create your own.

The 256 rhythm patterns are maintained as independent data; they are not part of a performance's data. This means that any one rhythm pattern can be shared by various rhythm sets or performances. In Performance mode, a number by which a rhythm pattern is recalled can be stored as one of the performance parameters. This number cannot be stored in Patch mode.

Rhythm Patterns and Rhythm Groups

On the Fantom-Xa, a set of rhythm pattern numbers, percussion instrument sounds and a rhythm set assigned to the nine pads is stored as a Rhythm Group.

Using Rhythm Groups

A "group" consists of settings for each of the nine pads, specifying the pattern that each pad will play. The rhythm set used by that group is also stored as part of the settings.

* *You are free to change how rhythm pattern numbers and rhythm sounds are assigned.*

Rhythm group data is not part of a rhythm set or performance; the 32 rhythm groups are stored as independent data. This means that any one rhythm group can be shared by various patches or performances. In addition to using the built-in rhythm groups, you can also create your own.
Rhythm Group settings can be saved independently for each performance. However, they cannot be saved as part of a patch.

Playing Rhythm

Turning Rhythm On and Off

1. **Press [RHYTHM] to turn it on.**
   The button will light.

2. **Play a pad (1–9).**
   According to the pad you pressed, the assigned rhythm pattern will begin playing.
   - A pattern will begin playing when you press any pad from 1–9 that is unlit.
   - A rhythm tone will sound when you press a pad that is lit.

The pattern or rhythm tone that is sounded by each pad can be specified in Rhythm Group Edit (p. 99).

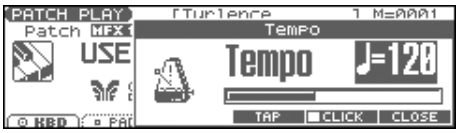
* *You can stop playback by pressing a blinking pad.*

3. **To stop rhythm pattern playback, press [RHYTHM] once again so the indicator goes out.**

Determining the Tempo for Rhythm Pattern Performances

This sets the Rhythm Pattern tempo.

1. Press [TEMPO].
The current tempo value appears in the display.



2. Use the VALUE dial or [INC] [DEC] to set the tempo value (5–300), or set the value by tapping [F4 (TAP)] a number of times with the same rhythm (Tap Tempo).

* *If you press [F5 (CLICK)] to add a check mark (✔), the click will sound.*

3. When you have made the setting, press [F6 (CLOSE)].

Using a controller to adjust the playback tempo

Since tempo control is assigned to one of the Fantom-Xa's realtime control knobs, it's easy to adjust the tempo at which the rhythm pattern will play back.

Tempo

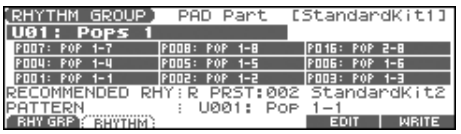
1. Press the REALTIME CONTROL button so the ARP/RHY indicator lights.

2. Play an Rhythm Pattern, and turn the realtime control knob.

Select the Rhythm Group

1. Hold down [SHIFT] and press [RHYTHM].

2. Press [F1 (RHY GRP)].
The RHYTHM GROUP screen appears.



* *When you select the Rhythm group, the most suitable rhythm set is assigned to the Pad part. (In the screen, this is indicated by "RECOMMENDED RHY (Recommended Rhythm set)."*

3. Use the VALUE dial or [INC] [DEC] to select a Rhythm group number.
This selects the Rhythm group's basic performance Style.
U01–32: User
P01–32: Preset

4. When you have finished selecting a Rhythm group, press [EXIT].

1. **Hold down [SHIFT] and press [RHYTHM].**

2. **Press [F2 (RHYTHM)].**
The RHYTHM PATTERN screen appears.

3. **Press to select the parameter.**

4. **Use the VALUE dial or [INC] [DEC] to make the setting.**

* *You can audition the rhythm pattern by pressing [F4 (PREVU)] to add a check mark (✔).*

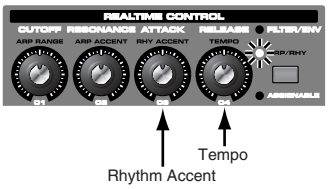
5. **When you hav./F132.868– patterapXITRHYTHM (96.3 6.3 6.3 S 1 1 1 r8 80 0 64 515.90rg 23 -22.6 re W n BT /F6 S BT 6 8 8 0 5 365 949.0001 Tm 1**

Using the Realtime Control Knobs to Control the Rhythm

You can use the realtime control knobs to control the rhythm in real time by adjusting the rhythm parameters.

1. Play rhythm.

2. Press the REALTIME CONTROL button so the ARP/RHY indicator lights.



3. Turn the REALTIME CONTROL knobs.

While Rhythm Patterns are playing, you can use the knobs to control the following parameters.

- **Accent** (p. 96)
- **Tempo** (p. 95)

Creating a Rhythm Pattern (Rhythm Pattern Edit)

In addition to using the built-in Rhythm Patterns, you are free to create your own. After creating an original Rhythm Pattern, you can store it in the internal user memory.

Broadly speaking, there are two ways to create a Rhythm Pattern.

Step-recording

In this method, you use the keyboard and pads to step-record your Rhythm Pattern. Each time you input a note, you will advance to the next step. This method is convenient when you want to create a Rhythm Pattern from scratch using a Pattern that contains no data.

MEMO

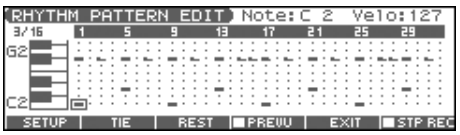
If you want to create "from scratch," you'll need to initialize the Pattern. In the RHYTHM PATTERN EDIT screen, hold down [SHIFT] and press [F4 (INIT)]. A message will ask whether you want to initialize; press [F6 (EXEC)] to execute initialization.

1. Hold down [SHIFT] and press [RHYTHM].

2. Press [F2 (RHYTHM)].

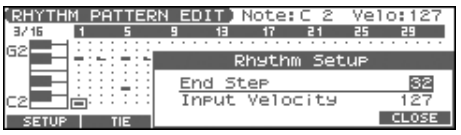
3. Press [F5 (EDIT)].

The RHYTHM PATTERN EDIT screen appears.



4. Press [F1 (SETUP)].

The Rhythm Setup window appears.



5. Press ▲ to move the cursor to "End Step."

6. Use the VALUE dial or [INC] [DEC] to specify the number of steps for the Rhythm Pattern.

7. Press ▼ to move the cursor to "Input Velocity."

8. Use the VALUE dial or [INC] [DEC] to specify the velocity setting for the data you will input.

The data will be input with the specified velocity.

9. Press [F6 (CLOSE)] to close the Rhythm Setup window.

10. Press [F6 (STP REC)] to add a check mark (✔).

Now you're ready to step-record.

- To move to the desired input location, press [CURSOR].
- To input notes, play the keyboard or pads.
- To input a tie, press [F2 (TIE)].
- To input a rest, press [F3 (REST)].
- To erase the note, hold down [SHIFT] and press [F6 (CLR NOTE)].
- To erase all notes at the current step, hold down [SHIFT] and press [F5 (CLR STEP)].
- You can press [F4 (PREVU)] to audition the pattern you've input.

MEMO

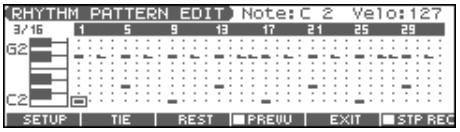
A maximum of sixteen note numbers (pitches) can be used in a single pattern.

11. When you have finished, press [F5 (EXIT)].

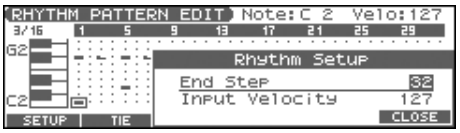
Using the VALUE Dial or [INC] [DEC] to Input Values

In this method, you'll use the cursor to specify the step or pitch that you want to input, and use the dial or [INC] [DEC] to input values. This method is convenient when you want to edit or modify previously input data.

1. **Hold down [SHIFT] and press [RHYTHM].**
2. **Press [F2 (RHYTHM)].**
3. **Press [F5 (EDIT)].**
   The RHYTHM PATTERN EDIT screen appears.



4. **Press [F1 (SETUP)].**
   The Rhythm Setup window appears.



5. **Press ▲ to move the cursor to "End Step."**
6. **Use the VALUE dial or [INC] [DEC] to specify the number of steps for the Rhythm Pattern.**
7. **Press [F6 (CLOSE)] to close the Rhythm Setup window.**
8. **Press [CURSOR] to specify the step or pitch you want to input.**

* *When using this method of input, you can use the keyboard to specify the pitch of the note. (Unlike when step-recording, pressing the keyboard will not actually input the note.)*

9. **Input the velocity value, using either the VALUE dial or [INC] [DEC].**
   You can input a tie by turning VALUE all the way to the right (or using [INC] to raise the value all the way).
   - You can also input a tie by pressing [F2 (TIE)].
   - To input a rest, press [F3 (REST)].
   - You can press [F4 (PREVU)] to audition the pattern you've input.

* *When using this method of input, you can use the pads to specify the velocity and finalize your input; after you've specified the step and pitch to be input, strike a pad to input it. (Higher-numbered pads produce higher velocity values; for example, striking pad 1 specifies a velocity value of 15, while striking pad 9 specifies a velocity value of 127.)*

MEMO

A maximum of sixteen note numbers (pitches) can be used in a single pattern.

10. **When you have finished, press [F5 (EXIT)].**

Saving the Rhythm Pattern You Have Created (Write)

The Rhythm Patterns you create are temporary; they are deleted as soon as you turn off the power or select some other Pattern. You can store 32 Rhythm Groups in the User memory.

Rhythm pattern settings are saved as independent data, not as part of the data for each patch. The settings in Patch mode, it is not possible to save rhythm pattern parameters (e.g., Rhythm Pattern, Grid, Duration).
It can be saved to individual in Performance mode. If you want to save your settings, press [WRITE] and save the performance.

1. **In the RHYTHM PATTERN screen, confirm that the current Rhythm Pattern is the one you want to save.**
2. **Press [F6 (WRITE)].**
   The RHYTHM PATTERN NAME screen appears.

3. **Assign a name to the Rhythm Pattern.**

cf.
For details on assigning names, refer to p. 28.

4. **When you have finished inputting the name, press [F6 (WRITE)].**
   A screen will appear, allowing you to select the write-destination pattern.

5. **Use the VALUE dial, [INC] [DEC], or ▲ ▼ to select the write destination.**
6. **Press [F6 (WRITE)].**
   A message will ask you for confirmation.
7. **To save the Rhythm Pattern, press [F6 (EXEC)].**

* *To cancel, press [F5 (CANCEL)].*

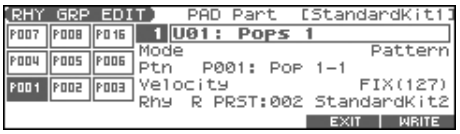
NOTE

Never switch off the Fantom-Xa while data is being saved.

Creating a Rhythm Group (Rhythm Group Edit)

Not only can you use the prepared internal Rhythm Groups that determine how rhythm are played, but you can also create them as well. This way, you can enjoy performing your own original rhythm group.

1. **Hold down [SHIFT] and press [RHYTHM].**
2. **Press [F1 (RHY GRP)].**
3. **Use the VALUE dial or [INC] [DEC] to select a rhythm group you want to edit.**
4. **Press [F5 (EDIT)].**
   The RHY GRP EDIT screen appears.



5. **Press ▲ ▼ to select the parameter.**
6. **Use the VALUE dial or [INC] [DEC] to set the value.**

Parameter	Value	Explanation
(PAD)	1–9	Select the pad for which you want to make settings. You can also choose the pad that you want to set by pressing that pad.
Mode	Off, Note, Pattern	Specifies whether a rhythm tone or a rhythm pattern number will be assigned to the pad.
When Mode is set to "Note"		
Note	C - –G9	Specifies the note number that will sound when you press the pad.
Velocity	FIX (127), 1–127	Specifies the strength of the sound heard when you press the pad.
When Mode is set to "Pattern"		
Ptn	U001–256, P001–256	Specifies the pattern number that will sound when you press the pad.
Velocity	FIX (127), 1–127	Specifies the velocity of the rhythm pattern.
Rhy	USER: 001–032 PRST: 001–036 GM: 001–009 CARD: 001–032 EXP: 001–	Specifies which rhythm set will be used.

7. **When you have finished, press [F5 (EXIT)].**

Saving the Rhythm Group You Have Created (Write)

The Rhythm Groups you create are temporary; they are deleted as soon as you turn off the power or select some other Group. You can store 32 Rhythm Groups in the User memory.

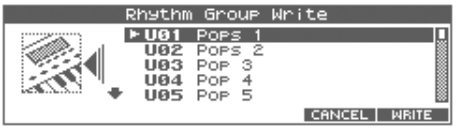
Rhythm group settings are saved as independent data, not as part of the data for each patch. The settings in Patch mode, it is not possible to save rhythm group settings.
It can be saved to individual in Performance mode. If you want to save your settings, press [WRITE] and save the performance.

1. **In the RHYTHM GROUP screen, confirm that the current Rhythm Group is the one you want to save.**
2. **Press [F6 (WRITE)].**
   The RHYTHM GROUP NAME screen appears.

3. **Assign a name to the Rhythm Group.**

cf.
For details on assigning names, refer to p. 28.

4. **When you have finished inputting the name, press [F6 (WRITE)].**
   A screen will appear, allowing you to select the write-destination group.



5. **Use the VALUE dial, [INC] [DEC], or ▲ ▼ to select the write destination.**
6. **Press [F6 (WRITE)].**
   A message will ask you for confirmation.
7. **To save the Rhythm Group, press [F6 (EXEC)].**

* *To cancel, press [F5 (CANCEL)].*

NOTE
Never switch off the Fantom-Xa while data is being saved.

Sampling

The Fantom-Xa lets you sample audio sources, such as an audio device, mic, or CD.

This section explains the sampling procedure and what the parameters do.

Sampling Procedure

1. Press [SAMPLING] to access the SAMPLING MENU screen.

The upper part of the screen will show the amount of free memory. If the free memory reaches 0%, no further sampling is possible.

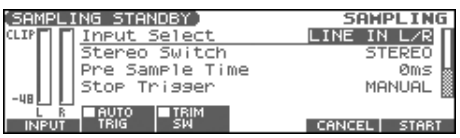
2. Press [F1 (SAMPLING)]–[F5 (SOLO)] to select the sampling mode. The sampling-standby screen will appear.

To cancel, press [F5 (CANCEL)].

* *You cannot sample the sound that is output from the OUTPUT B jacks. You'll need to set things up so that the sound you want to sample is output from the OUTPUT A (MIX) jacks.*

Sampling mode	Explanation
[F1 (SAMPLING)] Sampling	Sample a sound from an external input source. * *Operating the keyboards, pads, D Beam controller, or sequencer will not play the internal sound generator.*
[F2 (RE-SAMPL)] Re-Sampling	Resample the sound of the internal sound generator. The sound of the external input will not be heard.
[F3 (MIX)] Mix Sampling	Sample the combined sounds of the internal sound generator and an external input source.
[F4 (AUTO DIVIDE)] Auto divide Sampling	Sample an extended source, and automatically divide it into several samples at silent regions. If the sample contains silence, it will be divided at that point, and the subsequent portion will be assigned to the next sample number. * *Operating the keyboards, pads, D Beam controller, or sequencer will not play the internal sound generator.*
[F5 (SOLO)] Solo Sampling	While playing the internal sound generator as usual, sample only the sound from the external input. * *Effects cannot be applied to the external input sound.*

3. Make the settings for things such as the input source of the sound to be sampled, and triggering.



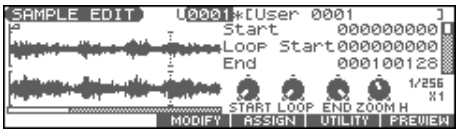
Parameter	Explanation
Input Select	Input source of the sound that is to be sampled **LINE IN L/R:** L/R (stereo) **LINE IN L:** L (mono) **MICROPHONE:** L (mono, mic level) * *This cannot be set when resampling.*
Stereo Switch	**MONO:** The sound will be sampled as one wave. If the sound is stereo, the left and right signals will be mixed. **STEREO:** The sound will be sampled as two waves, L and R. * *Mono sampling uses half as much memory space.*
Pre Sample Time	The length of sound preceding the moment at which sampling was manually or automatically initiated that will be captured in the sample. This lets you prevent the attack portion of the sound from being omitted from the sample. **0–1000 ms**
Stop Trigger	Specifies how sampling will end. **MANUAL:** Continue sampling until you press [STOP]. **BEAT:** Stop sampling after the specified number of beats at the current tempo (BPM). **TIME:** Sample the specified length of time.
Sampling Length	**When Stop Trigger is "BEAT"** Number of beats to continue sampling **1–20000**
	When Stop Trigger is "TIME" Length of time to continue sampling **00'00"010–90'00"000**
Auto Trigger Level	The volume at which sampling will begin if you have pressed [F2 (AUTO TRIG)] to turn Auto Trig ON. **0–7** (A setting of 0 is the minimum.)
Gap Time	The length of the silences at which the sample will be divided if the Sampling Mode is set to Auto Divide. **500, 1000, 1500, 2000 ms**
[F1 (INPUT)]	Makes settings for the external input (p. 101).
[F2 (AUTO TRIG)]	If a check mark (✔) is added, sampling will begin automatically when the input sound is detected.
[F3 (TRIM SW)]	If a check mark (✔) is added, the Start point and End point settings (p. 106) will be automatically adjusted after sampling is performed, so any silent portions at the beginning or end of the sampled sound are excluded.

4. Use the LEVEL knob on the rear panel to adjust the input level of the external source.

* *Using a connection cable that contains a resistor can cause the sound level to be low. Use a connection cable that does not contain a resistor.*

5. Press [F6 (START)] to begin sampling.
If Auto Trigger is set to ON, sampling will begin automatically when the input sound is detected.

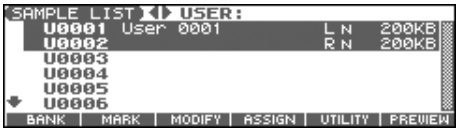
6. Stop sampling.
(If Stop Trigger is set to MANUAL, press [F5 (STOP)].)
The SAMPLE EDIT screen appears.



cf.

If you want to edit the sample, refer to p. 104.

When you finish sampling, the sample will automatically be added to the sample list. Press [SAMPLE EDIT <-> LIST] to view the sample list.



NOTE

Samples you record will be lost when you turn off the power. If you want to keep your sample, press [WRITE] to save it (p. 116). Samples shown as "N" in the sample list have not yet been saved.

7. Press [EXIT] to return to the previous screen.

Dividing a Sample During Sampling

1. During sampling, press [F6 (DIVIDE)].
The sample will be divided at the point where you pressed the button, and the subsequent material will be sampled as a sample of the next number.

* *When sampling in mono, you can divide the material into a maximum of 256 samples. When sampling in stereo, you can divide the material into a maximum of 128 samples (L/R total 256 samples).*

Sampling Time

The Fantom-Xa contains 4 MB of memory, which allows about 47 seconds of mono or about 23.5 seconds of stereo sampling. If you want to sample for a longer time than this, you must install separately sold memory (DIMM) (p. 216).

External Input Settings

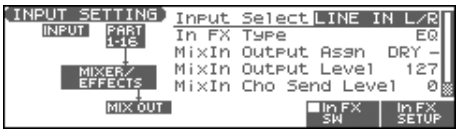
Switching External Input On/Off

1. Press [MIX IN] to turn it on/off.
When it is on, the button will light.

Making Input Source Settings (Input Setting)

1. Connect your CD player, mic, or other audio source to the AUDIO INPUT jacks located on the rear panel of the Fantom-Xa.

2. Hold down [SHIFT] and press [MIX IN].
The INPUT SETTING screen appears.



3. Press ▲ or ▼ to select the parameter.

4. Turn the VALUE dial or press [INC] [DEC] to set the value.

Parameter	Explanation
Input Select	Input source of the sound to be sampled **LINE IN L/R:** L/R (stereo) **LINE IN L:** L (mono) **MICROPHONE:** L (mono, mic level)
In FX Type	Type of effect that will be applied to the external input source (p. 102) **EQ, ENHANCER, COMPRESSOR, LIMITER, NOISE SUP, C CANCELLER**
Mix In Output Asgn	Output destination of the external input sound that is mixed in **DRY:** Output to OUTPUT (A) jacks without passing through effects **MFX:** Output through multi-effects * *When you select "MFX", selects which of the three multi-effects (**1–3**) will be used.*
Mix In Output Level	Volume level of the external input sound **0–127**
Mix In Cho Send Level	Depth of chorus applied to the external input source **0–127**
Mix In Rev Send Level	Depth of reverb applied to the external input sound **0–127**

5. Play back the external input source and turn the LEVEL knob to adjust the volume.

6. Press [EXIT] to return to the previous screen.

Cautions when using a microphone

Howling could be produced depending on the location of microphones relative to speakers. This can be remedied by:

1. Changing the orientation of the microphone.
2. Relocating microphone at a greater distance from speakers.
3. Lowering volume levels.

Input Effect Setup Settings

1. **Hold down [SHIFT] and press [MIX IN].**
   The INPUT SETTING screen appears.
2. **When using the Input Effect, add a check mark (✔) by pressing [F5 (In FX SW)] to turn it on.**
3. **Press [F6 (In FX SETUP)].**
   The INPUT FX SETUP screen appears.

4. **Press ▲ or ▼ to select the parameter.**
5. **Turn the VALUE dial, or press [INC] /[DEC] to set the value.**
6. **Press [EXIT] to return to the previous screen.**

Input Effect Parameters

Parameter	Value	Explanation
(Type)	1–6	Input effect type
1: Equalizer Adjusts the tone of the low-frequency and high-frequency ranges.		
Low Freq	200, 400 Hz	Center frequency of the low-frequency range
Low Gain	-15– +15 dB	Amount of low-frequency boost/cut
High Freq	2000, 4000, 8000 Hz	Center frequency of the high-frequency range
High Gain	-15– +15 dB	Amount of high-frequency boost/cut
2: Enhancer Modifies the harmonic content of the high-frequency range to add sparkle to the sound.		
Sens	0–127	Depth of the enhancer effect
Mix	0–127	Volume of the harmonics that are generated
3: Compressor Restrains high levels and boosts low levels to make the overall volume more consistent.		
Attack	0–127	Time from when the input exceeds Threshold until the volume begins to be compressed
Threshold	0–127	Volume at which compression will begin
Post Gain	0– +18 dB	Level of the output sound
4: Limiter Compresses the sound when it exceeds a specified volume, to keep distortion from occurring.		
Release	0–127	Time from when the input falls below Threshold until compression ceases
Threshold	0–127	Volume at which compression will begin
Post Gain	0– +18 dB	Level of the output sound
5: Noise Suppressor Suppresses noise during periods of silence.		
Threshold	0–127	Volume at which noise suppression will begin
Release	0–127	Time from when noise suppression begins until the volume reaches zero
6: Center Canceler Removes the sounds that are localized at the center of the stereo input. This is a convenient way to eliminate a vocal.		
Ch Balance	-50– +50	Volume balance of the left and right channels for removing the sound
Range Low	16–15000 Hz	Lower frequency limit of the band to be removed
Range High	16–15000 Hz	Upper frequency limit of the band to be removed

* *In the In FX SETUP screen, the Realtime Control knobs (C1–C4) can be used to edit the MFX parameters.*

Skip Back Sampling

Sometimes you may want to preserve a nice phrase that you happened to play a bit earlier. In such cases, you can use the Skip Back Sampling function to sample sounds played earlier in time.

When you execute skip-back sampling, several beats of your prior performance are saved as a sample. You can assign this sample to a pad and play it from the pad.

Button lit: Skip-back sampling can be performed.

Button unlit: Skip-back sampling cannot be performed. You cannot use skip-back sampling if there is insufficient free memory.

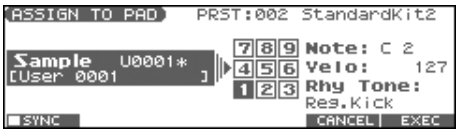
Button blinking: Skip Back Sampling will be executed.

1. Play the Fantom-Xa's keyboard or pads, or connect an instrument or some other device to the AUDIO INPUT jacks and input sounds or phrases.

2. Press [SKIP BACK].

The following screen will appear.

When Skip Back Sampling ends, the ASSIGN TO PAD screen will appear. Now you can specify the pad that will play the sound.



3. Select the desired pad by pressing it directly.

* *If you press [F1 (SYNC)] to add a check mark (✔), the Wave Tempo Sync parameter (p. 59) will be turned ON for the rhythm tone that is assigned.*

4. Press [F6 (EXEC)].

A message will ask your confirmation.

5. Press [F6 (EXEC)] to execute Assign to Pad.

* *To cancel, press [F5 (CANCEL)].*

The sample will be assigned (as a rhythm tone) to the specified pad, and the SAMPLE EDIT screen appears.

- Press [F3 (MODIFY)] to edit the sample (p. 106 and following).
- Press [F4 (ASSIGN)] to play the sample from the keyboard (p. 113).
- Press [F6 (PREVIEW)] to audition the sample.

MEMO

You can specify how far back sampling will occur when you perform skip-back sampling (5–40 seconds). With the factory settings this is set to 5 seconds.

NOTE

Samples captured by Skip Back Sampling will be lost when you turn off the power. If you want to keep the sample, perform the Save procedure (p. 116).

Editing a Sample

This section explains how you can edit a sample that you sampled/imported

Editing is performed in sample memory—a memory area dedicated to samples (p. 25).

Sample List

Select a sample from the list.

Selecting a Sample

1. Press [SAMPLE EDIT <-> LIST] to access the SAMPLE LIST screen.

2. Press ◀ or ▶ to select the group that contains the desired sample.

- **PRST:** preset samples
- **USER:** user samples
- **CARD:** samples stored on a memory card

* *You cannot edit preset samples.*

3. Use the VALUE dial, [INC] [DEC], or ▲ ▼ to select a sample.

* *You can press [F6 (PREVIEW)] to audition the selected sample.*

4. Press [ENTER] or [SAMPLE EDIT <-> LIST].

The SAMPLE EDIT screen appears.

The sample list shows the current state of the samples.

N (New): This is a sample that you sampled. It will be lost when you turn off the power. The same is true for samples imported as WAV/AIFF.

U (Unload): The sample has been saved, but not loaded into sample memory.

E (Edit): This is a sample that you loaded or sampled and are editing. Your edits will be lost when you turn off the power. If you want to keep them, you must Write the sample. Save this data as necessary.

If Load User Samples at Startup (p. 193) is turned off, samples will not be loaded into memory when you turn on the power. In this case, you will need to load samples into memory yourself. If you have unload a sample from sample memory, you will also need to load it again before you can re-select that sample.

Loading a Sample

Here's how you can load a sample from the user area, a memory card, or a preset into sample memory.

1. Press [SAMPLE EDIT <-> LIST] to access the SAMPLE LIST screen.

2. Press ◀ or ▶ to select the group that contains the desired sample.

3. Use the VALUE dial, [INC] [DEC], or ▲ ▼ to select a sample.

If you want to load two or more samples, press [F2 (MARK)] to add a check mark (✔) to the samples that you want to select.

To remove the check mark from a selected sample, select and press [F2 (MARK)] again.

If you hold down [SHIFT] and press [F4 (SET ALL)], a check mark will be added to all samples of the selected group.

If you hold down [SHIFT] and press [F3 (CLR ALL)], check marks will be removed from all selected samples.

4. Press [F5 (UTILITY)], and then press [F5 (LOAD)].

A message will ask you for confirmation.

5. Press [F6 (EXEC)] to load the sample.

To cancel, press [F5 (CANCEL)].

* *You can also perform this operation from the SAMPLE LIST or SAMPLE EDIT screen by pressing [MENU] and selecting "Load Sample."*

Loading all Samples

Here's all samples in the user memory and memory card can be loaded.

NOTE

When you execute Load All Samples, all unsaved samples will be erased.

* *If the total size of the data in the user bank and card bank exceeds the size of memory, the samples of the user bank will be loaded first. At this time, as many card bank samples as possible will be loaded, starting from the lowest-numbered sample.*

1. From the SAMPLE LIST screen, press [F5 (UTILITY)].

2. Press [F2 (LOAD ALL)].

A message will ask you for confirmation.

3. Press [F6 (EXEC)] to execute.

To cancel, press [F5 (CANEL)].

* *You can also perform this operation from the SAMPLE LIST screen by pressing [MENU] and selecting "3. Load All Samples."*

Unloading a Sample

Here's how you can unload a sample from sample memory. The saved sample file itself will not be deleted.

1. **With the SAMPLE LIST screen shown, press ◀ or ▶ to select the group that contains the sample you want to erase.**

2. **Use the VALUE dial, [INC] [DEC], or ▲ ▼ to select a sample.**
   If you want to unload two or more samples, press [F2 (MARK)] to add a check mark (✔) to the samples that you want to select.
   To remove the check mark from a selected sample, select and press [F2 (MARK)] again.
   If you hold down [SHIFT] and press [F4 (SET ALL)], a check mark will be added to all samples of the selected group.
   If you hold down [SHIFT] and press [F3 (CLR ALL)], check marks will be removed from all selected samples.

3. **Press [F5 (UTILITY)], and then press [F4 (UNLOAD)].**
   A message will ask you for confirmation.

4. **Press [F6 (EXEC)] to unload the sample.**
   To cancel, press [F5 (CANCEL)].

* *You can also perform this operation from the SAMPLE LIST or SAMPLE EDIT screen by pressing [MENU] and selecting "Unload Sample."*

Deleting a Sample

Here's how to completely delete a sample file.

* *You cannot delete the preset samples.*

1. **With the SAMPLE LIST screen shown, press ◀ or ▶ to select the group that contains the sample you want to delete.**

2. **Use the VALUE dial, [INC] [DEC], or ▲ ▼ to select a sample.**
   If you want to delete two or more samples, press [F2 (MARK)] to add a check mark (✔) to the samples that you want to select.
   To remove the check mark from a selected sample, select and press [F2 (MARK)] again.
   If you hold down [SHIFT] and press [F4 (SET ALL)], a check mark will be added to all samples of the selected group.
   If you hold down [SHIFT] and press [F3 (CLR ALL)], check marks will be removed from all selected samples.

3. **Press [F5 (UTILITY)], and then press [F3 (DELETE)].**
   A message will ask you for confirmation.

4. **Press [F6 (EXEC)] to delete the sample.**
   To cancel, press [F5 (CANCEL)].

* *You can also perform this operation from the SAMPLE LIST or SAMPLE EDIT screen by pressing [MENU] and selecting "Delete Sample File."*

Importing an Audio File (Import Audio)

Here's how an audio file (WAV/AIFF) can be loaded into memory as a sample.

* *Place the audio files in the "TMP/AUDIO_IMPORT" folder on the user memory or memory card. For details on how you can use your computer to copy a file into the user area or memory card, refer to p. 206.*

1. **From the SAMPLE LIST screen, press [F5 (UTILITY)] and then press [F1 (IMPORT AUDIO)].**
   The IMPORT AUDIO screen appears.

* *You can obtain the same result by pressing [MENU] and selecting "5. Import Audio" instead of performing step 1.*

2. **Press [F1 (USER)] or [F2 (CARD)] to select the import-source area.**
   [F1 (USER)]: Import from the user memory
   [F2 (CARD)]: Import from the memory card

3. **Press ▲ or ▼ to select the file that you want to import.**
   If you want to select two or more files, press [F3 (MARK)] to add a check mark (✔) to the files that you want to select.
   To remove the check mark from a selected file, select and press [F3 (MARK)] again.
   If you press [F5 (SET ALL)], a check mark will be added to all files of the selected folder. If you press [F4 (CLR ALL)], check marks will be removed from all selected files.

4. **Press [F6 (IMPORT)].**
   A message will ask you for confirmation.

5. **Press [F6 (EXEC)].**
   The file will be imported, and the SAMPLE LIST screen will appear.

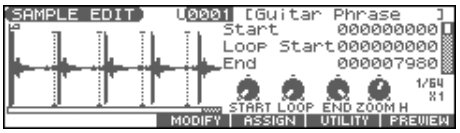
* *To cancel, press [F5 (CANCEL)].*

MEMO

The imported file will be added to the sample list as a sample. This sample is temporary, and will be lost when you turn off the power. If you want to keep it, press [WRITE] to save the data.

Sample Edit

1. From the SAMPLE LIST screen, Press [SAMPLE EDIT <-> LIST].
The SAMPLE EDIT screen appears.



NOTE

Samples that you edit will be lost when you turn off the power. If you want to keep them, you must Save them (p. 116).

Magnifying/Shrinking the Waveform Display (Zoom In/Out)

Here's how to change the magnification of the sample display.

- **Horizontal axis (time axis):** 1/1–1/16384
  Press ▶ to increase the display magnification.
  Press ◀ to decrease the display magnification.
- **Vertical axis (waveform amplitude axis):** x1–x128
  Hold down [SHIFT] and press ▲ to increase the display magnification.
  Hold down [SHIFT] and press ▼ to decrease the display magnification.

Setting the Start/End Points of the Sample

You can specify the portion of the sample that will actually sound. You can also specify the region that is to be looped.

1. With the SAMPLE LIST screen shown, select the sample that you want to edit (p. 104).

2. Press [SAMPLE EDIT].
The SAMPLE EDIT screen appears.

3. Use ▲ or ▼ to select the point that you want to set.

Point	Explanation
Start	Point at which playback will start Set this so that any unwanted portion at the beginning of the sample will be skipped, and the sound will begin at the desired moment.
Loop Start	Point at which loop playback (second and subsequent times) will start Set this if you want to loop the sound from a point other than the start point.
End	Point at which playback will end Set this so that any unwanted portion at the end of the sample will not be heard.

* *By pressing [F6 (PREVIEW)] you can audition the region between Start and End.*

4. Use the VALUE dial or [INC] [DEC] to move the point.
You'll probably find it convenient to zoom-in when making fine adjustments, and zoom-out when making major adjustments.
You can move the point in units of one beat by pressing [F1 (◀)] or [F2 (▶)].

MEMO

If you hold down [F6 (PREVIEW)] and move Start/Loop Start/En, the sample will play repeatedly across that point. This is a convenient way to check your setting.
(Zooming-in or zooming-out on the waveform will change the region that loops.)

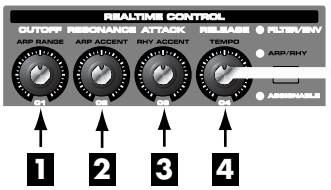
cf.

After specifying Start and End, you can execute Truncate (p. 108) to delete unwanted portions at the beginning and end of the sample.

* *Sample modify operations (Chop, Normalize, etc.) apply to the entire sample. Even if you specify Start or End, they will be ignored. If you want to apply the operation only to the region between the Start and End, use Truncate to delete unwanted portions of the sample, and then perform the sample modifying operation.*

Using the knobs to edit the points

You can use the REALTIME CONTROL knobs to edit each point. Using the knobs is convenient when you need to make large changes to the value.
From the left, the knobs have the following functions.



1 : Start Point **2** : Loop Start **3** : End Point
4 : Zoom-in/zoom-out the horizontal axis of the display

Making Settings for Sample (Sample Parameters)

Here you can make various settings for the sample.

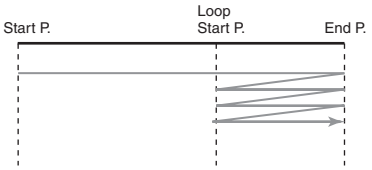
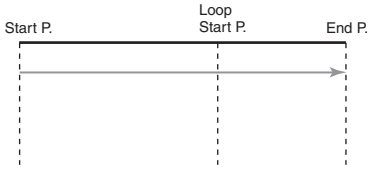
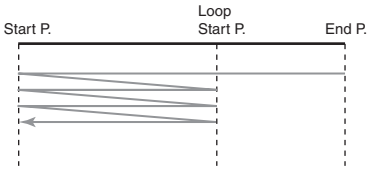
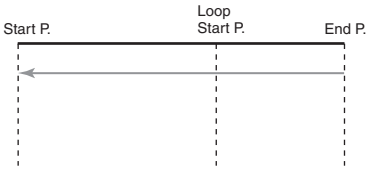
1. With the SAMPLE LIST screen shown, select the sample that you want to edit.

2. Press [SAMPLE EDIT <-> LIST] to access the SAMPLE EDIT screen.

3. Press ▲ or ▼ to select a parameter.

4. Use the VALUE dial or [INC] [DEC] to edit the value.

5. Press [EXIT] when you are finished.

Parameter	Explanation
Start Loop Start End	Refer to **Setting the Start/End Points of the Sample** (p. 106).
Loop Mode	Specifies how the sample will be played. **FWD:** After the Sample played back from Start to End, it will then be repeatedly played back in the forward direction, from the Loop Start to End.  **ONE-SHOT:** The sample will be played back only once, from the Start to End.  **REV:** When the sample has been played back from End to Start, it will be repeatedly played back in the reverse direction, from Loop Start to Start.  **REV-ONE:** The sample will be played back only once from End to Start in the reverse direction. 
Tempo	Original tempo of the sample You can hold down [SHIFT] and use the VALUE dial or [INC] [DEC] to adjust the value to the right of the decimal point. **5.00–300.00** * *In order to synchronize the tempo, Wave Temp Sync (p. 43) must be turned ON.*
Org Key	Note number that will play the sample at the pitch at which it was sampled **0 (C -2)–127 (G9)**
Time Stretch	Specifies how the tempo will be synchronized. Decreasing this value will optimize the sound for more rapid phrases, and increasing this value will optimize the sound for slower phrases. **TYPE01–TYPE10**
Start Fine	Fine adjustment of the Start point **0–255**
Loop Start Fine	Fine adjustment of the Loop Start point **0–255**
Loop End Fine	Fine adjustment of the End point **0–255**
Loop Tune	Pitch of the loop region Make fine adjustments in one-cent (1/100 semitone) increments. **-50– +50**
Zoom Horz	Display magnification (horizontal axis) **1/1–1/16384**
Zoom Vert	Display magnification (vertical axis) **x1–x128**

Automatically calculating a sample's tempo

1. **Move the cursor to "Tempo" and press [F1(CALC)].**
   The Tempo Calculator window appears.
2. **Use [CURSOR] to move the cursor, and use the VALUE dial or [INC] [DEC] to specify the number of measures in the sample and its time signature.**
3. **Press [F3 (EXEC)].**
   The sample's tempo will be calculated automatically.

* *To cancel, press [F2 (CLOSE)].*

About the beat

Samples contain beat data. Up to 100 beat locations are specified for one sample. If the sample contains more than 100 beats, fifty beat locations will be specified from the beginning and end of the sample, respectively.

When you want to reset the beat indication (Reset Grid function)

You can reassign the sample grid according to the specified Start point and Tempo.

1. **In the SAMPLE EDIT screen, specify the Start point and Tempo of the sample.**
2. **Press [F5 (UTILITY)], and then press [F1 (RESET GRID)].**
   A message will ask you for confirmation.
3. **Press [F6 (EXEC)] to execute.**
   To cancel, press [F5 (CANCEL)].

Removing Unwanted Portions of a Sample (TRUNCATE)

This operation cuts the portions of the sample that are earlier than the Start Point and later than the Loop End Point.

* *You cannot execute this with more than one sample selected.*

1. **Press [SAMPLE EDIT <-> LIST] to access the SAMPLE EDIT screen.**
2. **Specify the Start/End points of the sample (p. 106).**
3. **Press [F3 (MODIFY)] to open the Sample Modify Menu window.**
4. **Press [F1 (TRUNC&EMPHS)], and then press [F1 (TRUNC)].**

5. **If you want to replace the current sample with the truncated sample, press [F4 (OVER WRITE)] to display the "✔" mark.**
6. **Press [F6 (EXEC)].**
   A message will ask you for confirmation.
7. **To execute, press [F6 (EXEC)].**

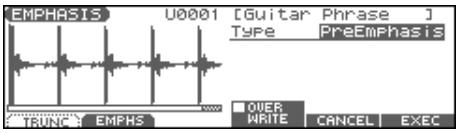
* *To cancel, press [F5 (CANCEL)].*

Boosting or Limiting the High-frequency Range of the Sample (EMPHASIS)

In some cases, the audio quality will be improved if you boost the high-frequency range of an imported sample. Also, the high-frequency range of the sample may be emphasized when you use a sampler made by another manufacturer. In this case, you can minimize the change in tonal character by attenuating the high-frequency range.

* *You cannot execute this with more than one sample selected.*

1. **Press [SAMPLE EDIT <-> LIST] to access the SAMPLE EDIT screen.**
2. **Press [F3 (MODIFY)] to open the Sample Modify Menu window.**
3. **Press [F1 (TRUNC&EMPHS)], and then press [F2 (EMPHS)].**



4. **Use the VALUE dial or [INC] [DEC] to select the emphasis type.**
   PreEmphasis: Emphasizes the high-frequency range.
   DeEmphasis: Attenuates the high-frequency range.
5. **If you want to replace the current sample with the emphasized sample, press [F4 (OVER WRITE)] to display the "✔" mark.**
6. **Press [F6 (EXEC)].**
   A message will ask you for confirmation.
7. **To execute, press [F6 (EXEC)].**

* *To cancel, press [F5 (CANCEL)].*

Maximizing the Volume of a Sample (NORMALIZE)

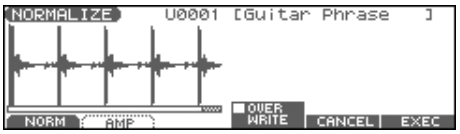
This operation raises the level of the entire sample as much as possible without exceeding the maximum level. In some cases, the volume of a phrase you resampled (p. 100) will be lower than the volume of the original phrase. In this case, it is a good idea to boost the volume by executing the Normalize operation.

* *You cannot execute this with more than one sample selected.*

1. Press [SAMPLE EDIT <-> LIST] to access the SAMPLE EDIT screen.

2. Press [F3 (MODIFY)] to open the Sample Modify Menu window.

3. Press [F2 (NORM & AMP)], and then press [F1 (NORM)].



4. If you want to replace the current sample with the normalized sample, press [F4 (OVER WRITE)] to display the "✔" mark.

5. Press [F6 (EXEC)].
A message will ask you for confirmation.

6. To execute, press [F6 (EXEC)].

* *To cancel, press [F5 (CANCEL)].*

AMP

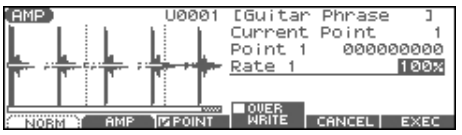
This operation adjusts the volume of the entire sample. You can also apply an envelope (time-variant change) to the volume of the sample.

* *You cannot execute this with more than one sample selected.*

1. Press [SAMPLE EDIT <-> LIST] to access the SAMPLE EDIT screen.

2. Press [F3 (MODIFY)] to open the Sample Modify Menu window.

3. Press [F2 (NORM & AMP)], and then press [F2 (AMP)].



4. If you want to adjust the volume of the entire sample, use the VALUE dial or [INC] [DEC] to set the rate of volume boost.

Parameter	Explanation
Rate	Rate of volume boost Specifies how much boost will be applied relative to the current volume **0–400%**

5. If you want to apply an envelope, specify points.
Press [F3 (POINT)] to display the "✔" mark. Then press ▲ or ▼ to select a parameter, and then use the VALUE dial or [INC] [DEC] to set the value.

Parameter	Explanation
Current Point	Currently selected point Beginning near the start point, the points will be numbered 1, 2, 3, or 4.
Point 1–4	Location of the current point
Rate 1–4	Amplification ratio of the current point Specifies how the volume of each point is to be boosted relative to the current value. **0–400%**

6. If you want to replace the current sample with the edited sample, press [F4 (OVER WRITE)] to display the "✔" mark.

7. Press [F6 (EXEC)].
A message will ask you for confirmation.

8. To execute, press [F6 (EXEC)].

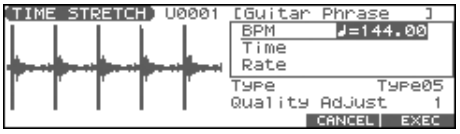
* *To cancel, press [F5 (CANCEL)].*

Stretching or Shrinking a Sample (TIME STRETCH)

This operation stretches or shrinks the sample to modify the length or tempo. You can stretch or shrink the sample by a factor of one half to double the original length.

* *You cannot execute this with more than one sample selected.*

1. **Press [SAMPLE EDIT <-> LIST] to access the SAMPLE EDIT screen.**
2. **Press [F3 (MODIFY)] to open the Sample Modify Menu window.**
3. **Press [F3 (TIME STRETCH)].**



4. **Press ▲ or ▼ to select the parameter.**
5. **Use the VALUE dial or [INC] [DEC] to specify the tempo/length.**
   When setting the BPM (tempo) value, you can hold down [SHIFT] and turn the VALUE dial, or use [INC] [DEC] to adjust the value to the right of the decimal point.

Parameter	Explanation
BPM	Change the BPM of the sample to the BPM you specify.
Time	Specify the length of the sample as a time value.
Rate	Specify the length relative to the current length of the sample. **50.0–200.0%**
Type	Lower settings of this value will make the sound more suitable for faster phrases, and higher settings will make the sound more suitable for slower phrases. **TYPE01–TYPE10**
Quality Adjust	Make fine adjustments to the tonal quality of the Time Stretch. **1–10**

6. **Press [F6 (EXEC)].**
   A message will ask you for confirmation.
7. **To execute, press [F6 (EXEC)].**
   The length of the sample will be changed as specified.

* *To cancel, press [F5 (CANCEL)].*

Dividing a Sample into Notes (CHOP)

The **chop** function divides a sample waveform into separate notes.

* *The Create Rhythm function (p. 114) makes it easy to create a rhythm set from a chopped sample.*

* *You cannot execute this with more than one sample selected.*

1. **Press [SAMPLE EDIT <-> LIST] to access the SAMPLE EDIT screen.**
2. **Press [F3 (MODIFY)] to open the Sample Modify Menu window.**
3. **Press [F4 (CHOP)].**

4. **Specify the point(s) at which the sample is to be divided.**
   Refer to "Procedure for Dividing a Sample" or "Automatically Dividing a Sample (Auto Chop)" (p. 111).
5. **Audition the sample as described in the section "Auditioning the Divided Samples" (p. 111).**
   If you want to re-make settings, move or delete the point (p. 111).
6. **Press [F6 (EXEC)].**
   A message will ask you for confirmation.
7. **To execute the division, press [F6 (EXEC)].**
   The divided samples will be added to the sample list.

* *To cancel, press [F5 (CANCEL)].*

When you execute the Chop operation, a message will ask whether you want to execute Create Rhythm.

- **If you want to execute Create Rhythm, press [F6 (EXEC)].**
  For the rest of the procedure, refer to p. 114.
- **If you don't want to execute Create Rhythm, press [F5 (CANCEL)].**

Procedure for Dividing a Sample

You can freely specify the dividing point(s).

1. **Press ▲ or ▼ to move the cursor to "Current Address."**
2. **Use the VALUE dial or [INC] [DEC] to move the point.**
3. **At the location where you want to divide the sample, press [F2 (ADD)].**
   The current location will be the dividing point.
4. **Repeat steps 2 and 3 to specify other dividing points.**
   You can specify up to 15 dividing points; i.e., the sample will be divided into a maximum of 16 pieces.

Automatically Dividing a Sample (Auto Chop)

Here's how you can automatically specify the points at which the sample is to be divided, and then divide the sample.

1. From step 3 of p. 110, press [F4 (AUTO)].
The Auto Chop window will appear.

2. Use the VALUE dial or [INC] [DEC] to select the method by which the sample is to be divided.

3. Press ▼ and then use the VALUE dial or [INC] [DEC] to set the value.

Parameter	Explanation
Chop Type	How the sample will be divided **Level:** Divide according to volume. **Beat:** Divide at beats based on the Tempo (p. 107) of the sample. **Divide x:** Divide into 'x' number of equal lengths.
If Chop Type is Level	
Level	Level at which the sample is to be divided Lower settings of this value will cause the sample to be divided more finely. **1–10**
If Chop Type is Beat	
Beat	Beat interval at which the sample is to be divided **1/32, 1/16T, 1/16, 1/8T, 1/8, 1/4T, 1/4, 1/2, 1/1, 2/1**
If Chop Type is Divide x	
Times	Number of samples into which the sample is to be divided **2–16**

4. Press [F6 (EXEC)].
The sample will be automatically divided according to your settings, and the points will be specified. A maximum of 15 division points will be set (16 regions).

* *To cancel, press [F5 (CANCEL)].*

Moving/Deleting a Dividing Point

1. Press ▲ or ▼ to move the cursor to "Point No."

2. Use the VALUE dial or [INC] [DEC] to select the point that you want to move or delete.
In order from the start point, the points are numbered 1, 2,...15.

3. To move the dividing point, press ▼ and then turn the VALUE dial.

4. To delete the dividing point, press [F3 (CLEAR)].

Auditioning the Divided Samples

After dividing the sample, you can audition each of the divided samples. Select "Point No." and press [F1 (PREVIEW)].

* *You can press the pads to audition each of the divided samples. From the sample nearest to the start point, the samples will be played by pads [1], [2],...[9].*

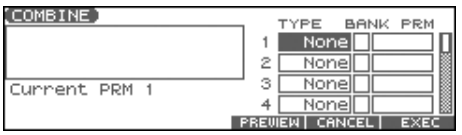
Joining Two or More Samples (COMBINE)

This operation combines multiple samples into a single sample. You can combine as many as sixteen samples. You can also place silent spaces between the samples.

1. Press [SAMPLE EDIT <-> LIST] to access the SAMPLE EDIT screen.

2. Press [F3 (MODIFY)] to open the Sample Modify Menu window.

3. Press [F5 (COMBINE)].



4. Press ▲, ▼, ◀, or ▶ to select a parameter.

5. Use the VALUE dial or [INC] [DEC] to set the value.

Parameter	Explanation
TYPE	Sample or silence to be combined **None:** none **Sample:** sample **Time:** silent region (specified as time) **Beat:** silent region (specified as a note value)
BANK	Bank that contains the sample **U:** user **C:** card * *This will be displayed only if TYPE is set to Sample.*
PRM	Sample number, or the duration/note value of the silent region The note value is based on the BPM of the sample immediately before the silent region. * *If there is no sample immediately before the silent region, the current BPM will be used.* If TYPE is set to Sample **1–2000** If TYPE is set to Time **1–10000 ms** If TYPE is set to Beat **1/32, 1/16T, 1/16, 1/8T, 1/8, 1/4T, 1/4, 1/2, 1/1, 2/1**

* *You can press [F4 (PREVIEW)] to audition the selected sample.*

6. Press [F6 (EXEC)].
A message will ask you for confirmation.

7. To execute, press [F6 (EXEC)].

* *To cancel, press [F5 (CANCEL)].*

Assigning Samples to a Pad (Assign to Pad)

Here's how to assign samples as the rhythm tones of a rhythm set. For example, you can create an original rhythm set by replacing certain tones of a preset rhythm set with different samples.

* *From the SAMPLE LIST screen you can also press [F4 (ASSIGN)]-> [F5 (To PAD)] to execute Assign to Pad.*

* *You cannot execute this with more than one sample selected.*

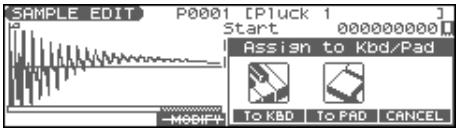
From Patch Mode

1. With the SAMPLE LIST screen shown, select a sample.

2. Press [SAMPLE EDIT <-> LIST] to access the SAMPLE EDIT screen.

3. Press [F4 (ASSIGN)].

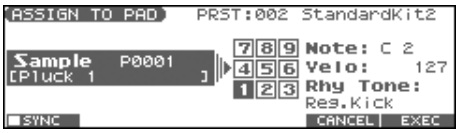
The Assign to Kbd/Pad window will appear.



4. Press [F5 (To PAD)].

The ASSIGN TO PAD screen will appear.

If a rhythm set is not assigned to the pad, a message will ask "Change into Rhythm and Initialize?", asking if you want to assign an initialized rhythm set to the pad. Press [F6 (EXEC)].



5. Select the desired pad by pressing it directly.

* *If you press [F1 (SYNC)] to add a check mark (✔), the Wave Tempo Sync parameter (p. 59) will be turned ON for the rhythm tone that is assigned.*

6. Press [F6 (EXEC)].

A message will ask your confirmation.

7. Press [F6 (EXEC)] to execute Assign to Pad.

The sample will be assigned (as a rhythm tone) to the specified pad.

* *To cancel, press [F5 (CANCEL)].*

8. Press [EXIT] to return to the previous screen.

NOTE

If you select another rhythm set, the rhythm set you assigned will be replaced by that rhythm set. If you want to keep the rhythm set you created, press [WRITE] and save it (p. 57).

From Performance Mode

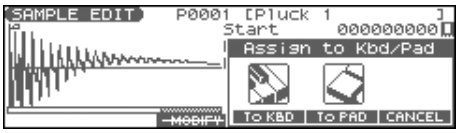
Before you continue with the procedure below, make sure you're in Performance mode, and select the rhythm set to which you want to assign the sample.

1. With the SAMPLE LIST screen shown, select a sample.

2. Press [SAMPLE EDIT <-> LIST] to access the SAMPLE EDIT screen.

3. Press [F4 (ASSIGN)].

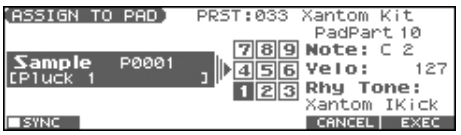
The Assign to Kbd/Pad window will appear.



4. Press [F5 (To PAD)].

The ASSIGN TO PAD screen will appear.

If a rhythm set is not assigned to the pad (part 10), a message will ask "Change into Rhythm and Initialize?", asking if you want to assign an initialized rhythm set to the selected part.



5. Select the desired pad by pressing it directly.

* *If you press [F1 (SYNC)] to add a check mark (✔), the Wave Tempo Sync parameter (p. 59) will be turned ON for the rhythm tone that is assigned.*

6. Press [F6 (EXEC)].

A message will ask your confirmation.

7. Press [F6 (EXEC)] to execute Assign to Pad.

The sample will be assigned (as a rhythm tone) to the specified pad.

* *To cancel, press [F5 (CANCEL)].*

8. Press [EXIT] to return to the previous screen.

NOTE

If you select another rhythm set, the rhythm set you assigned will be replaced by that rhythm set. If you want to keep the rhythm set you created, press [WRITE] and save it (p. 57).

Assigning a Sample as a Patch to a Part (Assign to Keyboard)

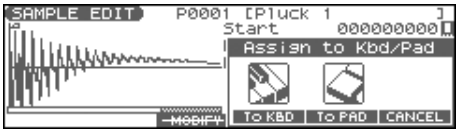
Here's how you can use the currently selected sample to create a patch, and assign it to a keyboard part.

* *From the SAMPLE LIST screen you can also press [F4 (ASSIGN)]-> [F4 (To KBD)] to execute Assign to Keyboard.*

* *You cannot execute this with more than one sample selected.*

From Patch Mode

1. **With the SAMPLE LIST screen shown, select a sample.**
2. **Press [SAMPLE EDIT <-> LIST] to access the SAMPLE EDIT screen.**
3. **Press [F4 (ASSIGN)].**
   The Assign to Kbd/Pad window will appear.



4. **Press [F4 (To KBD)].**
   The Assign to Keyboard window will appear.

* *If you press [F1 (SYNC)] to add a check mark (✔), the Wave Tempo Sync parameter (p. 43) will be turned ON for the patch that is assigned.*

5. **Press [F6 (EXEC)].**
   A message will ask your confirmation.
6. **Press [F6 (EXEC)] to execute Assign to Keyboard.**
   The sample will be assigned (as a patch) to the keyboard.

* *To cancel, press [F5 (CANCEL)].*

7. **Press [EXIT] to return to the previous screen.**

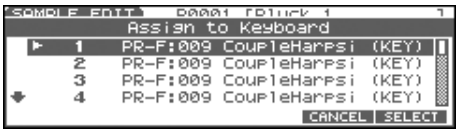
NOTE

If you select another patch, the patch you assigned will be replaced by that patch. If you want to keep the patch you created, press [WRITE] and save it.

From Performance Mode

1. **With the SAMPLE LIST screen shown, select a sample.**
2. **Press [SAMPLE EDIT <-> LIST] to access the SAMPLE EDIT screen.**
3. **Press [F4 (ASSIGN)].**
   The Assign to Kbd/Pad window will appear.

4. **Press [F4 (To KBD)].**
   The Assign to Keyboard window will appear, and you can verify the assignment for the part.



5. **Press ▲ or ▼ to specify the part to which the new patch is to be assigned, and then press [F6 (SELECT)].**

* *If you press [F1 (SYNC)] to add a check mark (✔), the Wave Tempo Sync parameter (p. 43) will be turned ON for the patch that is assigned.*

6. **Press [F6 (EXEC)]**
   A message will ask you for confirmation.
7. **Press [F6 (EXEC)] to execute Assign to Keyboard.**
   The sample will be assigned (as a patch) to the specified part.

* *To cancel, press [F5 (CANCEL)].*

8. **Press [EXIT] to return to the previous screen.**

NOTE

If you select another patch, the patch you assigned will be replaced by that patch. If you want to keep the patch you created, press [WRITE] and save it.

Create a Rhythm Set (Create Rhythm)

Here's how you can use the sample(s) to create a rhythm set. This operation is called **Create Rhythm.**

When you execute Create Rhythm, the sample(s) will become a rhythm set and will be assigned to a part.

For example, you could record a sample, use the Chop function to divide it, and then use this Create Rhythm operation to assign the divided samples to a part as a rhythm set. Alternatively, you can assign a mark to two or more samples in the sample list, and execute Create Rhythm to assign the samples to a part as a rhythm set.

The samples will be assigned consecutively from the C2 key.

1. With the SAMPLE LIST screen shown, select the samples.

If you want to select two or more samples, press [F2 (MARK)] to add a check mark (✔) to the samples that you want to select.

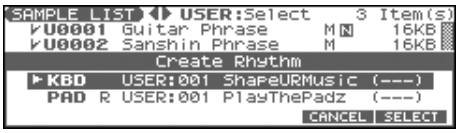
To remove the check mark from a selected sample, select and press [F2 (MARK)] again.

You can press [F6 (PREVIEW)] to audition the selected sample.

2. Press [F4 (ASSIGN)], and then press [F3 (RHYTHM)].

The Create Rhythm window will appear.

Patch Mode



Performance Mode

3. Press ▲ or ▼ to select the part that you want to assign, and then press [F6 (SELECT)].

The Create Rhythm window will appear.

* *If you press [F1 (SYNC)] to add a check mark (✔), the Wave Tempo Sync parameter (p. 59) will be turned ON for the rhythm tone that is assigned.*

4. Press [F6 (EXEC)].

The sample will be assigned (as a rhythm set) to the specified part.

* *To cancel, press [F5 (CANCEL)].*

5. Press [EXIT] to return to the previous screen.

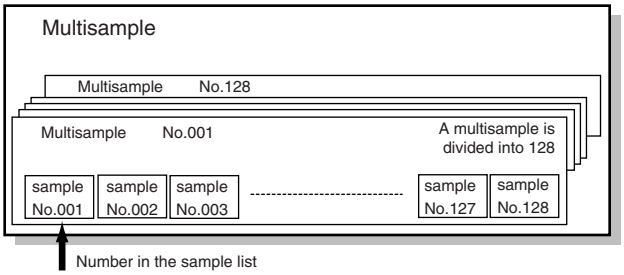
NOTE

If you select another rhythm set, the rhythm set you assigned will be replaced by that rhythm set. If you want to keep the rhythm set, press [WRITE] and save it (p. 57).

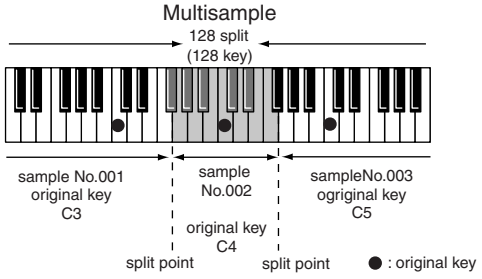
Creating a Multisample (Create Multisample)

Two or more samples assigned to different keys are collectively called a "multisample." One multisample can assign up to 128 samples divided ("split") across the notes of the keyboard. A memory card can store 128 multisamples.

In order to hear a multisample, you'll need to assign it to a Part as a Patch. Choose the desired samples to create the multisample, and then assign it as a patch to a keyboard part for use.



If, for example, only one note (e.g., the sound of the C4 key) is sampled from a wide-ranging instrument such as a piano, and assigned to the entire range of keys, it will sound unnatural when played significantly below or above its original pitch. If the instrument is sampled at several different pitches and assigned to different ranges of the keyboard, this unnatural effect can be minimized.



When you create a multisample, the split points are automatically determined according to the original key of each sample. Before you begin this process, you should set the original key of each sample to the range where you want it to be assigned. (**Assigning a multisample to the desired keys** (p. 115))

A sample will not sound at a pitch higher than one octave above the original key.

1. Press [SAMPLE EDIT <-> LIST] to access the SAMPLE LIST screen, and select the sample(s) that you want to include in your new multisample.

If you want to select two or more samples, press [F2 (MARK)] to add a check mark (✔) to the samples that you want to select.

To remove the check mark from a selected sample, select and press [F2 (MARK)] again.

If the total number of marks exceeds 128, the multisample will be created from the 128 lowest-numbered samples.

You cannot create a multisample using samples from more than one group.

* *You can press [F6 (PREVIEW)] to audition the selected sample.*

2. Press [F4 (ASSIGN)], and then press [F2 (MLT SMP)].

The CREATE MULTISAMPLE screen will appear.

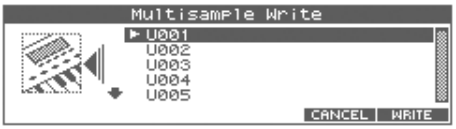
3. Assign a name.

cf.

For details on assigning names, refer to p. 28

4. When you have finished inputting the name, press [F6 (WRITE)].

A screen will appear, allowing you to select the destination for the write.



5. Use the VALUE dial, [INC] [DEC], or ▲ ▼ to select the write destination.

Multisamples consisting of user samples will be written to User, and multisamples consisting of card samples will be written to Card.

6. Press [F6 (WRITE)].

A message will ask you to confirm the operation.

7. If you are sure you want to write the multisample, press [F6 (EXEC)].

* *To cancel, press [F5 (CANCEL)].*

NOTE

Never switch off the Fantom-Xa while data is being saved.

8. When the data has been written, the Assign to Keyboard window will appear.

* *If you press [F1 (SYNC)] to add a check mark (✔), the Wave Tempo Sync parameter (p. 43) will be turned ON for the patch that is assigned.*

9. If you want to use the multisample as a patch, press [F6 (EXEC)].

A message will ask you for confirmation.

10. Press [F6 (EXEC)].

* *To cancel, press [F5 (CANCEL)].*

NOTE

Never turn off the power while data is being written.

* *You can't listen to a multisample unless it's assigned to a part as a patch. If you press [F5 (CANCEL)] at this point, the multisample will be saved, but you'll need to perform the additional step of assigning the saved multisample to the keyboard in order to actually play it (p. 113).*

Assigning a multisample to the desired keys

In order to assign a multisample to the desired keys, you'll need to set the Original Key of each sample to the appropriate keys. Then, when you execute the Create Multisample operation, the Fantom-Xa will assign the samples to the keyboard and set the split points automatically.

1. Press [SAMPLE EDIT <-> LIST] to access the SAMPLE LIST screen, and select one of the samples within the multisample.

2. Press the [SAMPLE EDIT <-> LIST] button to access the SAMPLE EDIT screen.

3. Press ▲ or ▼ to move the cursor to "Org Key."

4. Use the VALUE dial or [INC] [DEC] to set the Org Key to the note number of the key to which you want to assign the sample.

5. Press the [SAMPLE EDIT <-> LIST] button to return to the SAMPLE LIST screen, and set the Org Key for the other samples in the same way.

MEMO

When creating a multisample, you'll need to change the Original Key of more than one sample. After you've made the setting for the first sample, you can simply press [SAMPLE LIST] to access the Sample List screen, select another sample and press [ENTER] to go directly to the Sample Param screen.

* *The Original Key you specify here needs to be saved for each sample.*

6. When you've finished setting the Original Key of all samples, create the multisample.

Saving a Sample (Write)

A newly loaded sample, as well as any changes you've made in the settings for a sample will be lost as soon as you turn off the power. If you want to keep such data, you must save it as follows.

1. Press [SAMPLE EDIT <-> LIST] to access the SAMPLE LIST screen.

Samples displayed as "N" or "E" have not yet been saved (p. 104).

2. Select the sample that you want to save.

If you want to select two or more samples, press [F2 (MARK)] to add a check mark (✔) to the samples that you want to select.

To remove the check mark from a selected sample, select and press [F2 (MARK)] again.

If you hold down [SHIFT] and press [F4 (SET ALL)], a check mark will be added to all samples of the selected group.

If you hold down [SHIFT] and press [F3 (CLR ALL)], check marks will be removed from all selected samples.

3. Press [WRITE].

The WRITE MENU screen will appear. Make sure that "Sample" is highlighted.

4. Press [F3 (SAMPLE)] or [ENTER].

If you have selected more than one sample, a message will ask you to confirm the writing operation. Samples will be written into the identical number corresponding to each bank of the sample list. Sample names will be assigned automatically. If you want to write the samples, press [F6 (EXEC)]. If you decide to cancel, press [F5 (CANCEL)].

5. Assign a name to the sample.

cf.
For details on assigning names, refer to p. 28

6. When you have finished inputting the name, press [F6 (WRITE)].

A screen will appear allowing you to select the write-destination sample.

7. Use the VALUE dial, [INC] [DEC], or ▲ ▼ to select the write destination sample number.

The write destination can be either the Fantom-Xa's internal user memory (User), or a memory card (Card).

8. Press [F6 (WRITE)].

A message will ask you for confirmation.

9. Press [F6 (EXEC)] to execute the save operation.

* *To cancel the operation, press [F5 (CANCEL)].*

NOTE

Never switch off the Fantom-Xa while data is being saved.

- You can't save by overwriting another sample.
- Stereo samples must be saved to two consecutive sample numbers.

Using the Pads

The pads of the Fantom-Xa function in the same way as the keyboard, and can also be used to play RPS and rhythm patterns.

Using the Hold Function to Sustain a Sound

You can use the Hold function to make the sound continue even after you take your finger off the pad. This is useful when you want a sound such as a looped (repeating) phrase to play continuously.

To play other sounds while holding one sound

1. **Hold down a pad ([1]–[9]) and press [HOLD].**
   [HOLD] and the pad will blink.
   Hold will be turned on, and the tone will continue sounding even when you take your finger off the pad. In this state, pressing another pad will cause its tone to sound only as long as you continue pressing that pad.

2. **When you once again press the blinking pad or [HOLD], the sound will stop.**

To hold two or more samples

1. **Press [HOLD] so the pad is lit.**

2. **Press a pad.**
   The tone whose pad is blink will continue sounding. If you press another pad in this state, its sample will also continue sounding in the same way.

3. **The sound will stop when you press a blinking pad. When you press [HOLD], all samples will stop pad sounding.**

NOTE

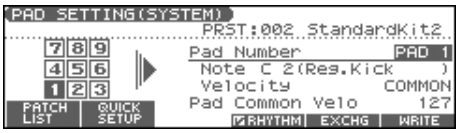
The Hold function will not work in the following cases:

- When RPS is on (p. 154)
- When the Tone Env Mode parameter (p. 58) is set to "NO-SUS"
- When the One Shot Mode parameter (p. 58) is on

Making Settings for the Pads (Pad Setting)

Here you can make various settings for playing the pads; e.g., the note number that each pad will send to the sound generator section.

1. **Hold down [SHIFT] and press a pad ([1]–[9]).**
   The PAD SETTING screen appears.



2. **Press the pad for which you want to make settings.**

3. **Press [CURSOR] to select the parameter.**

4. **Use the VALUE dial or [INC] [DEC] to make pad settings.**

Parameter	Value	Explanation
Pad Part (Displayed in Performance mode)	1–16	Part that will be played by the pad This parameter is available only in Performance mode.
(Patch/Rhythm Set Group)	USER, PR-A–F (PRST), GM, CARD, EXP	Specifies the patch or rhythm set group.
(Patch/Rhythm Set Number)	—	Selects the patch or rhythm set number.
Pad Number	PAD 1–PAD 9	Select the pad for which you want to make settings.
Note	C - –G9	Note number transmitted by the selected pad
Velocity	COMMON, 1–127	Strength of the sound when you strike the pad **COMMON:** The Pad Common Velo (the overall velocity sensitivity setting for all pads) will be used. **1–127:** The sound generator will be played with that velocity value.
Pad Common Velo	1–127	For all nine pads, this specifies the velocity (loudness) that is produced when you press a pad. If the pad Velocity setting (of each pad) is set to other than COMMON, those settings will be used.

* *If you want to use the Rhythm set settings for the pad part, press [F4 (RHYTHM)] to add a check mark (✔).*

Quick Setup

This lets you make basic pad settings. For the greatest efficiency, use Quick Setup to choose the settings that are closest to what you have in mind. Then make the necessary changes for each pad.

1. In the PAD SETTING screen, press [F2 (QUICK SETUP)].
The Quick Setup window appears.

* *This won't work if the Rhythm Pattern function is turned on. In order to make these settings, you'll need to press [RHYTHM] to turn off the Rhythm Pattern function.*

2. Press ▲ ▼ to select the parameter.

3. Use the VALUE dial or [INC] [DEC] to make settings.

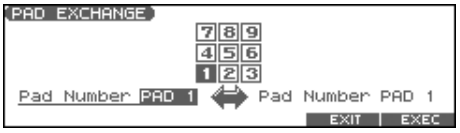
Parameter	Explanation
Template Set	**Note:** The nine consecutive note numbers starting at the Base Note will be automatically assigned to the pads. **Rhythm:** The note numbers will be arranged in the most suitable way for playing a rhythm set. **Multi Velo:** Assigns the very same note number to each of the nine pads—but with differing velocities. This is convenient if you need precise control of the velocity while you play.
Base Note	When Template Set is set to "Note" **C - –G9:** Lowest note When Template Set is set to "Rhythm" ignored When Template Set is set to "Multi Velo" **C - –G9:** Note number that all pads will play

Exchanging the Sound of Two Pads (Pad Exchange)

Here's how to exchange the sound of two selected pads.

* *This setting exchanges the note numbers transmitted by the pads.*

1. In the PAD SETTING screen, press [F5 (EXCHG)].
The PAD EXCHANGE screen appears.



2. Press ◀ ▶ to move the cursor, and select the number of a pad you want to exchange.
Use the VALUE dial or [INC] [DEC], or press a pad directly to make your selection.

3. Press [F6 (EXEC)] to execute.

4. Press [F5 (EXIT)] to return to the previous screen.

Writing the Pad Settings

You can save one set of settings as System settings for Patch mode. Press [F6 (WRITE)] to save the settings.

If you make settings in Performance mode, the pad settings will also be saved when you save the performance. This means that in Performance mode, you can have separate pad settings for each performance.
For details on how to save a performance, refer to **Saving a Performance You've Created (Write)** (p. 72).

Mode	Parameter	Write procedure
Performance mode	Pad Common Velo	Press [F6 (WRITE)]. * *Saved as System parameter.*
	Pad settings other than the above	Press [WRITE]. * *Saved as performance parameters.*
Patch mode	All pad settings	Press [F6 (WRITE)]. * *Saved as System parameter.*

Assigning a Pattern to a Pad (RPS Function)

The Fantom-Xa lets you assign a previously recorded phrase to a pad as a pattern, and play it by pressing that pad. For details, refer to **Playing a Phrase at the Touch of a Finger (RPS)** (p. 154).

Using the Pads to Play Rhythms

The Fantom-Xa lets you assign rhythm patterns and/or rhythm sounds to the pads and play them by pressing the pads. For details, refer to **Playing Rhythms** (p. 94).

Playing Back a Song

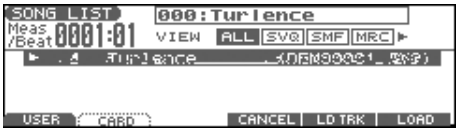
This chapter explains how you can use the Fantom-Xa's sequencer to play back a song.

When you play back a song, we recommend that you use the sound generator in **Performance mode**. In Performance mode, up to sixteen different sounds can be played separately by the sixteen parts, making this mode ideal for playing songs that are multi-instrument ensembles of drums, bass, piano, etc.

Playing a Song Immediately (Quick Play)

The Fantom-Xa is able to play a song from user memory and memory card immediately, without first loading the song into Temporary Area. This is called the **Quick Play** function.
Quick Play can be used with MRC Pro songs (extension:.SVQ) and Standard MIDI Files (extension:.MID).

1. Press [SONG EDIT <-> LIST] twice.
The SONG LIST screen appears.



2. Use the VALUE dial or [INC] [DEC] to select the song.

- **[F1 (USER)]:** Songs in user memory
- **[F2 (CARD)]:** Songs on a memory card

* *By pressing ◀ or ▶ in the above screen, you can specify the type of songs that will be displayed. If various types of songs are saved together, it will be easier to find the desired song if you restrict the displayed file types in this way.*

ALL: all songs will be displayed
SVQ: only SVQ files will be displayed
SMF: only Standard MIDI Files will be displayed
MRC: only MRC files will be displayed

3. Press [▶] to start playback.
When the song finishes playing, it will stop automatically. If you want to stop playback midway through the song, press [■].

MEMO

If you have interrupted song playback, "+" may be displayed at the right of the measure number. This indicates that the song is stopped in mid measure.

NOTE

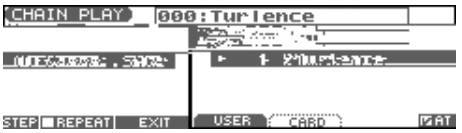
There will be no sound if samples have not been loaded for the patches used in the song. You must load the necessary samples beforehand (p. 153).

Playing Back Songs Consecutively (Chain Play)

The **Chain Play** function lets you consecutively play back (Quick Play) songs on user memory or memory card.

1. In the PATCH PLAY screen, PERFORM LAYER screen, or PERFORM MIXER screen, press [MENU].

2. Use ▲ ▼ to select "5. Chain Play," and then press [ENTER].
The CHAIN PLAY screen appears.



3. Press [F1 (USER)] if you want to choose from user memory, or press [F2 (CARD)] if you want to choose from memory card.

* *You cannot combine USER songs and CARD songs.*

If you want to perform Chain Play repeatedly, press [F5 (REPEAT)] to add a check mark (✔). If you press [F4 (AT STEP)] to add a check mark (✔), playback will ends, and the next song will begin playing automatically.

4. Press [▶] to start Chain Play.
Starting from the song of step 1. If you want to stop playback before it is finished, press [■].

* *If you want to begin playback from midway through the chain, use ▲ or ▼ to move to the desired step, and then press [▶].*

5. When you are finished with Chain Play, press [■].

6. Press [F6 (EXIT)] to return to the previous screen.

NOTE

Chain Play cannot be started or stopped by a Start or Stop message from an external MIDI device. Nor will MIDI Continue, Song Position Pointer, Song Select, or Clock messages be received.

Various Playback Methods

Fast-Forward and Rewind During Playback

Fast-forward, rewind, and jump can be performed during playback, as well as while stopped. Use the following procedures for each operation.

Fast-forward: Press [▶▶].

Continuous fast-forward: Press and hold [▶▶].

Rapid fast-forward: Hold down [▶▶] and press [◀◀].

Rewind: Press [◀◀].

Continuous rewind: Press and hold [◀◀].

Rapid rewind: Hold down [◀◀] and press [▶▶].

Jump to the previous locate position:
Hold down [SHIFT] and press [◀◀].

Jump to the next locate position:
Hold down [SHIFT] and press [▶▶].

Jump to the beginning of the song:
Press [|◀].

- A certain amount of time may be required for fast-forward, rewind, or jump during Quick Play.
- Song playback will be interrupted if you jump to the beginning or end of the song while the song is playing.

Playing Back Correctly from the Middle of the Song (MIDI Update)

When you play back from the middle of a song, for example after fast-forward or rewind, the correct patch may not be selected, or the pitch may be incorrect. This is because the MIDI messages in the area that you skipped have not been transmitted to the sound generator. In such cases, you can use the **MIDI Update** function. When you perform MIDI Update, the MIDI messages (other than Note messages) from the beginning of the song until the location to which you moved will be transmitted to the sound generator, ensuring that the sound generator will be in the correct state for the resumption of playback.

1. Make sure that song playback is stopped.

* *It is not possible to perform MIDI Update while the song is playing.*

2. Hold down [SHIFT] and press [▶].
The display will indicate "MIDI Update..." while processing takes place, and when finished, will indicate "MIDI Update Completed!"

Muting the Playback of a Specific Instrument (Part Mute)

If you want to silence the playback of a specific instrument, you can mute the part that contains the sequencer data for that instrument.

1. Press [MUTE] to make it light.

2. Press PART/TRACK [1]–[8] to mute the corresponding part so that its indicator lights.
If you want to mute part 9–16, press [9-16] to make its indicator lit, and press PART/TRACK [1]–[8].

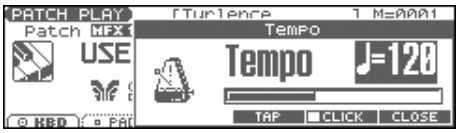
3. To turn on the part, once again press PART/TRACK [1]–[8] you pressed in step 2 so the indicator goes dark.

Changing the Playback Tempo of a Song

The tempo at which a song will play back is recorded on its tempo track, but the tempo of the entire song can be adjusted during playback. The tempo at which the song actually plays is called the **playback tempo**.

* *The playback tempo is a temporary setting. It will be lost if you switch to another song or turn off the power. If you want the song to always play back at this tempo, you must re-save the song (p. 150).*

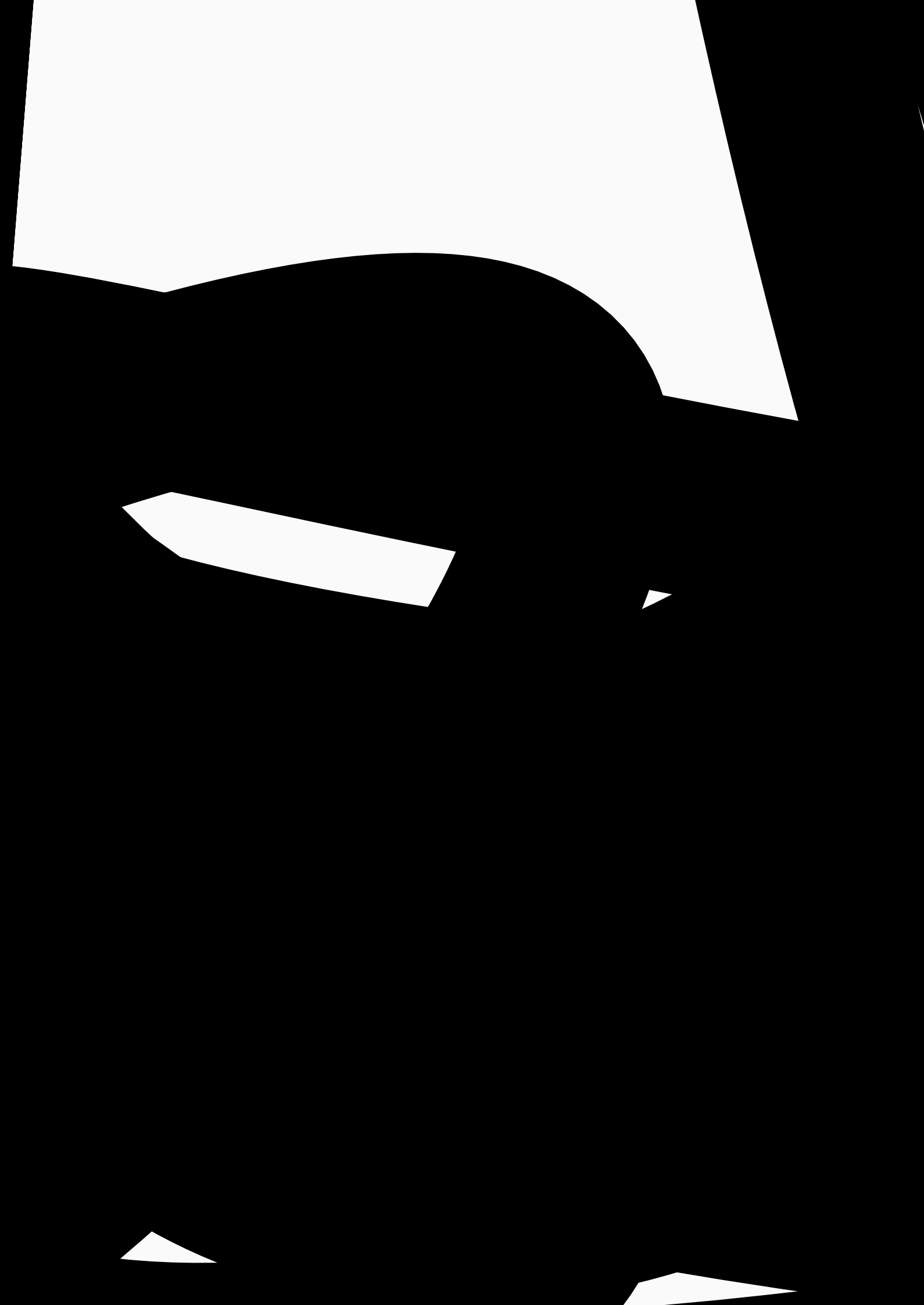
1. Press [TEMPO].
The Tempo window appears.



2. Use the VALUE dial or [INC] [DEC] to set the playback tempo.

- If you press [F5 (CLICK)] to add a check mark (✔), a click will sound at the specified tempo.
- By pressing [F4 (TAP)] you can set the tempo to the timing at which you press the button (Tap Tempo). Press the button three or more times at quarter-note intervals of the desired tempo.

3. When you have finished making settings, press [F6 (CLOSE)].



Recording Songs

This chapter explains the procedure for using the Fantom-Xa's sequencer to record a song.

TIP

Before you begin this procedure, put the sound generator in **Performance mode**. Normally, when recording or playing back a song, you will put the sound generator in Performance mode. The reason for this is that in this mode, only the sound of the specified MIDI channel will be heard when you record while playing the keyboard of the Fantom-Xa, and that when the song is played back, the parts can independently play up to 16 different sounds. Thus, Performance mode is suitable for recording and playing back a song that uses an ensemble of multiple instruments, such as drums, bass, and piano.

In Performance mode, we recommend that you leave the keyboard switches (p. 68) turned off (unchecked). If any keyboard switches are on (checked), parts other than the current part will also sound when you play the keyboard; you probably don't want this to occur while you're creating a song.

Two Recording Methods

You can use one of two methods of recording: **realtime recording** or **step recording**. Select the method that is appropriate for your situation.

Realtime Recording (p. 124)

Realtime recording is the recording method in which your keyboard playing and controller operations are recorded just as you perform them.

Step Recording (p. 128)

Step recording is the recording method in which you can input notes and rests one by one. This method is suitable for inputting drums or bass with precise timing. In addition to using notes, you can also create a song by putting patterns together.

Before You Record a New Song

Overview of the Recording Process

The work flow for recording a new song is as follows.

1. **Select the sound to be used for recording**
2. **Clear the Temporary Song**
3. **Specify the time signature of the song (p. 123)**
4. **Set the tempo (p. 123)**
5. **Use realtime recording (p. 124) or step recording (p. 128) to record**
6. **Use track edit (p. 133) or micro edit (p. 144) to edit the song**
7. **Save the song to user memory or memory card (p. 150)**

With the factory settings, demo song data will automatically be loaded into Temporary Area when the Fantom-Xa is powered up. Here's how to change this setting so that this automatic load does not occur (i.e., the song memory will remain empty).

1. **Press [MENU].**
2. **Press ▲ ▼ to select "1. System," and then press [ENTER].**
3. **Press [F1 (GENERAL)], and then press [F2 (AUTO LD)] to select "Startup."**
4. **Press ▲ ▼ to select "Load Demo Song at Startup."**
5. **Use the VALUE dial or [INC] [DEC] to set it to "OFF."**

Select the Sound to be Used for Recording

Before you record a song, select the sound that you want to use for recording. Select the recording method that is appropriate for your situation.

Performance

Select a Performance when you want to record an ensemble performance using multiple instruments. When recording a song, we recommend that you normally select a Performance.

Patch/Rhythm set

Select a patch or rhythm set if you want to use a single patch or rhythm set to record your playing.

Erasing the Song/Pattern from Temporary Song (Song Clear)

When you record a song, the sequencer data is temporarily recorded in Temporary Area. If you want to record a new song, you must erase any existing sequencer data from Temporary Song.

NOTE

If Temporary Song contains an important song that you want to keep, you should first save that song to user memory/memory card (p. 150).

1. **In the SONG LIST screen, select the song that you want to erase (p. 119).**
2. **Press [SONG EDIT <-> LIST] to access the SNG EDIT (TRK) screen.**
3. **Press [F3 (UTILITY)], and then press [F2 (SONG CLEAR)].**
   A message will ask you for confirmation.
4. **Press [F6 (EXEC)] to execute the operation.**

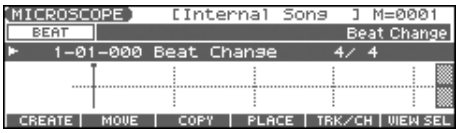
* *To cancel, press [F5 (CANCEL)].*

When the operation has been completed, the display will briefly indicate "Completed!"

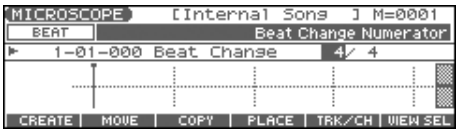
Specifying the Time Signature

Before you record a new song, you must specify the time signature. However, a time signature of 4/4 is automatically specified when you perform the Song Initialize operation or when the power is turned on, so you will need to make this setting only if you want to record a new song in a different time signature.

1. **Press [SONG EDIT <-> LIST] to access the SNG EDIT (TRK) screen.**
2. **Press [F4 (MICRO)].**
   The MICROSCOPE screen appears.
3. **Press [F5 (TRK/CH)].**
   The Track/Ch Select window appears.
4. **Press ▲ ▼ to move the cursor to "Track."**
5. **Use the VALUE dial or [INC] [DEC] to select "BEAT" (beat track).**
6. **Press [F6 (CLOSE)].**
   The Microscope screen for the BEAT track appears.



7. **Press ◀ ▶ to move the cursor to "Beat Change Numerator" or "Beat Change Denominator."**



8. **Use the VALUE dial or [INC] [DEC] to specify the time signature.**

cf.

If you want to change time signatures midway through the song, refer to **Changing the Time Signature Midway Through the Song** (p. 149).

9. **Press [EXIT] to return to the previous screen.**

cf.

If you are recording to a phrase track, see **Recording Your Performance as You Play It (Realtime Recording)** (p. 124).

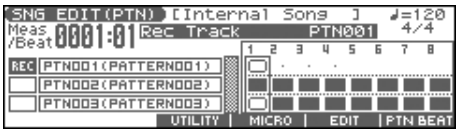
Specifying the Time Signature of a Pattern (Pattern Beat)

Each pattern has a Pattern Beat setting that manages the time signature of that pattern. The pattern beat acts as a guide when the pattern is played or recorded, and is handled independently of the time signature of the song (i.e., the time signature recorded in the beat track).

The pattern beat is normally set to a time signature of 4/4, but you can change this setting when the song has a time signature other than 4/4, or when you want to record a pattern with a time signature different than that of the song.

Only one pattern beat setting can be specified at the beginning of each pattern. This means that it is not possible to change time signatures midway through a pattern.

1. **Press [SONG EDIT <-> LIST] to access the SNG EDIT (TRK) screen.**
2. **Press SEQUENCER [PATTERN] to make it light.**
   The SNG EDIT (PTN) screen appears.



3. **Use the VALUE dial or [INC] [DEC] to select the pattern.**
4. **Press [F6 (PTN BEAT)].**
   The Pattern Beat window appears.

5. **Press ◀ ▶ to move the cursor.**
6. **Use the VALUE dial or [INC] [DEC] to set the time signature.**
7. **Press [F6 (CLOSE)] to return to the previous screen.**

Setting the Tempo

Set the tempo at which the song is to be recorded.

1. **Press [TEMPO].**
   The Tempo window appears.

2. **Use the VALUE dial or [INC] [DEC] to set the playback tempo.**
   - If you press [F5 (CLICK)] to add a check mark (✔), a click will sound at the specified tempo. This will switch on/off each time you press the button.
   - By pressing [F4 (TAP)] you can set the tempo to the timing at which you press the button (Tap Tempo). Press the button three or more times at quarter-note intervals of the desired tempo.
3. **When you have finished making settings, press [F6 (CLOSE)].**

Recording Your Performance as You Play It (Realtime Recording)

Realtime Recording is the recording method in which your keyboard playing and controller operations are recorded just as you perform them. Use this recording method when you want to capture the nuances of your own performance.

Basic Operation for Realtime Recording

1. Make sure that the preparations for recording have been completed as described in "Before You Record a New Song" (p. 122).

TIP

If you want to record into an existing song, load the desired song into Temporary Song (p. 131). Then press [►►] or [◄◄] to specify the measure at which you want to begin recording. The measure at which recording will begin is indicated by the "M=" in the upper right of each PLAY screen.

2. Press [●].

The [●] indicator will blink, and the Realtime Rec Standby window appears.

This window lets you set various parameters for realtime recording.

MEMO

If you want to record a pattern, press [PATTERN] to make it light.

3. As basic settings, specify the following three parameters. Use [CURSOR] to move the cursor to each parameter, and use the VALUE dial or [INC] [DEC] to make the setting.

Parameter	Value	Explanation
Rec Track	TRK 1–TRK 16, PTN001–PTN100 (* when recording on a pattern)	Specify the phrase track or pattern on which you want to record.
Rec Mode	MIX, REPLACE	Select how recording is to take place.
	MIX: Mix-recording will be carried out. Normally, you will record using this method. If a performance has already been recorded on the recording-destination track, your newly recorded performance will be added to the existing performance without erasing it. By using this in conjunction with Loop-recording, you can record repeatedly over a specified area without erasing the previously recorded performance. For example, this is a convenient way to record a drum performance one instrument at a time; bass drum -> snare drum -> hi-hat, etc. **REPLACE:** Replace-recording will be carried out. If a performance has already been recorded on the recording-destination track, it will be erased as you record your new performance. Use this when you want to re-record.	
Count In	OFF, 1 MEAS, 2 MEAS, WAIT NOTE	Select how recording is to begin.
	OFF: Recording will begin immediately when you press [►]. **1 MEAS:** When you press [►], a count (playback) will begin one measure before the recording-start location, and recording will begin when you reach the recording-start location. **2 MEAS:** When you press [►], a count (playback) will begin two measures before the recording-start location, and recording will begin when you reach the recording-start location. **WAIT NOTE:** As an alternative to pressing [►], you can play the keyboard, strike a pad, or press the Hold pedal to start recording.	

In the Realtime Rec Standby window you can perform the following operations.

- Specifying the punch-in/out points (p. 125)
- Specifying the loop points (p. 125)
- Quantize (p. 126)
- Selecting the sequencer data that will be recorded (p. 127)

For details on these operations, refer to the appropriate page.

4. When you are finished making settings in the Realtime Rec Standby window, press [►] or [F6 (START)].

The Realtime Rec Standby window will close, the [●] indicator will change from blinking to lit, and recording will begin.

When recording begins, the Realtime Rec Control window will appear.

5. When you are finished recording, press [■].

The [●] indicator will go dark.

TIP

If you are not satisfied with the realtime recording you just made, you can press [ERASE/UNDO] to return to the state prior to recording. After executing Undo, you can use Redo to revert to the previous state. After executing Undo, you can execute Redo by performing the above procedure once again.

Recording Tempo Changes in a Song (Tempo Recording)

If you want the tempo to change during the song, you can record those tempo changes in the Tempo track. If tempo changes have already been recorded in the tempo track, they will be rewritten.

Set the following recording parameters in addition to the basic settings described in step **3** of p. 124.

Parameter	Value	Explanation
Tempo Rec Sw	OFF, ON	Specify whether tempo changes will be recorded (ON), or not (OFF).

TIP

You will be able to use REALTIME CONTROL knob movements to control the tempo easily (p. 121).

Loop Recording and Punch-In Recording

You can record repeatedly over a specified area (Loop recording), or re-record just that area (Punch-in recording).

Set the following recording parameters in addition to the basic settings described in step **3** of p. 124.

Parameter	Explanation
Loop/ Punch	Specify how loop recording or punch-in recording is to take place.
	OFF: Loop recording or punch-in recording will not occur. **LOOP (POINT):** Recording takes place repeatedly, according to the loop point settings. **LOOP (1–16 MEAS):** The 1–16 measure area starting at the record-start measure will be recorded repeatedly. **LOOP SONG ALL:** The entire song from beginning to end will be recorded repeatedly. **AUTO PUNCH:** Auto punch-in recording will be performed. **MANUAL PUNCH:** Manual punch-in recording will be performed.
Start Point	Measure and beat at which loop recording or auto punch-in recording is to begin * *It is not possible to specify the Tick.*
End Point	Measure and beat at which loop recording or auto punch-in recording is to Stop. * *It is not possible to specify the Tick.* * *The minimum loop length is four quarter notes.*

Using Auto Punch-In Recording

You must pre-specify the area (punch points) in which recording is to take place. This is convenient when you want to re-record over a mistake. The song will play back when you begin recording. When you reach the punch-in point, playback will switch to record mode.

1. In the Realtime Rec Standby window, set the Loop/Punch parameter to "AUTO PUNCH."

2. Set the Start Point/End Point parameters to the desired punch points.

3. Move to a measure earlier than the specified Start Point, and press [►] or [F6 (START)].

The song will begin playing. Recording will begin at the location specified by the Start Point parameter. Playback will resume at the location specified by the End Point parameter.

4. Press [■] to stop playback.

Using Manual Punch-In Recording

Recording takes place (erasing the existing data) in the area that you specify by pressing a pedal or button. This is convenient when you want to re-record more than one location in which you made a mistake. The song will play back when you begin recording. When you press a pedal or button, playback will switch to record mode, and will switch back to play mode when you press the pedal or button once again. By pressing the pedal or button, you can toggle between record and play modes.

TIP

If you want to use a pedal connected to the PEDAL CONTROL jack to specify the area for recording, you must first set the Control Pedal Assign parameter to "PUNCH IN/OUT" (p. 195).

1. In the Realtime Rec Standby window, set the Loop/Punch parameter to "MANUAL PUNCH."

2. Press [►] or [F6 (START)].

Song playback will begin, and the Realtime Rec Control window will appear.

3. At the point where you want to begin recording, press [F3 (PUNCH IN)] or step on the pedal.

Playback will switch to record mode.

4. At the point where you want to stop recording, once again press [F3 (PUNCH OUT)] or step on the pedal.

You will return to playback mode.

5. Press [■] to stop playback.

Selecting the Sequencer Data that will Be Recorded (Recording Select)

When you use realtime recording, all of your sequencer data will normally be recorded. If you want to avoid recording a specific type of data, you can turn its Recording Select setting "OFF."

1. Press [●].

2. Press [F5 (REC SELECT)].
The Recording Select window appears.

3. Press [CURSOR] to select the sequencer data (MIDI messages) that will be recorded.

MIDI Message	Explanation
Note	Represent notes.
Control Change	Apply various effects such as modulation or expression.
Program Change	Select sounds.
System Ex	Used to make settings unique to the Fantom-Xa, such as sound parameters.
Channel After	Apply aftertouch to an entire MIDI channel.
Poly After	Apply aftertouch to individual keys.
Pitch Bend	Change the pitch.

4. Use the VALUE dial or [INC] [DEC] to add a check mark (✔).
The message will be recorded if you assign a check mark (✔), and will not be recorded if you remove the check mark.

- [F4 (ALL ON)]: All of the sequencer data will be recorded.
- [F5 (ALL OFF)]: No sequencer data will be recorded.

5. Press [F6 (CLOSE)] to close the Recording Select window.

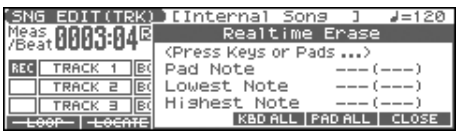
Erasing Unwanted Data While You Record (Realtime Erase)

Realtime Erase is a function that erases unwanted data during realtime recording. This is particularly convenient during loop recording, since it lets you erase data without stopping recording.

* *Realtime Erase can be executed only if the Recording Mode is set to "MIX."*

1. Begin realtime recording (p. 124).
The Realtime Rec Control window appears.

2. Press [ERASE/UNDO].
The Realtime Erase window appears.



3. Erase unwanted data.

- To erase all data (except for Pattern Call messages), press [F4 (KBD ALL)]. Data will be erased for as long as you hold down the button.
- To erase notes of a specific key (pad), hold down that key (pad). Data for that note will be erased for as long as you hold down that key.
- To erase notes of a specific key range, hold down the top and bottom keys of that range. Data for that range will be erased for as long as you hold down those keys.

4. Press [F6 (CLOSE)] to close the Realtime Erase window.
You will return to the normal recording state.

* *You can also erase the data of a specific channel.*

Recording Arpeggios Aligned to the Measures of the Sequencer

When recording arpeggios in real time, you can synchronize the arpeggio with the sequencer start/stop timing.
For details, refer to **Arp/Rhythm Sync Switch** (p. 200).

Auditioning Sounds or Phrases While Recording (Rehearsal Function)

The Rehearsal function lets you temporarily suspend recording during realtime recording. This is convenient when you want to audition the sound that you will use next, or to practice the phrase that you will record next.

1. Begin realtime recording (p. 124).
The Realtime Rec Control window appears.

2. Press [F6 (REHEARSAL)] or [●].

The [●] indicator will blink, indicating that you are in rehearsal mode. In this state, nothing will be recorded when you play the keyboard.

3. To return to record mode, press [F6 (REHEARSAL)] or [●] once again.

Inputting Data One Step at a Time (Step Recording)

Step Recording is the method of inputting notes and rests individually, as if you were writing them onto a musical staff. In addition to inputting notes, this method can also be used to create a song by joining patterns.

Inputting Notes and Rests

1. Make sure that the preparations for recording have been performed as described in "Before You Record a New Song" (p. 122).

TIP

If you want to record into an existing song, load the desired song into Temporary Song (p. 131). Then press [▶▶] or [◀◀] to specify the measure at which you want to begin recording. The measure at which recording will begin is indicated by the "M=" in the upper right of each PLAY screen.

2. Press [●] twice, or hold down [SHIFT] and press [●].

The [●] indicator blinks, and the Step Rec Standby window appears.

MEMO

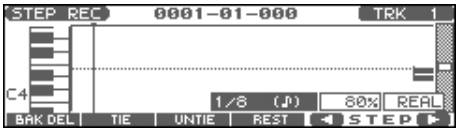
If you want to record a pattern, press [PATTERN] to make it light.

3. Make settings for step recording. Use [CURSOR] to move the cursor to the desired parameter, and use the VALUE dial or [INC] [DEC] to set it.

Parameter	Value	Explanation
Rec Track	TRK 1–TRK 16, PTN001–PTN100 (* when recording on a pattern)	Specify the phrase track or pattern on which you want to record.
Rec Mode	MIX, REPLACE	Select how recording is to take place.
	MIX: Mix-recording will be carried out. Normally, you will record using this method. If a performance has already been recorded on the recording-destination track, your newly recorded performance will be added to the existing performance without erasing it. **REPLACE:** Replace-recording will be carried out. If a performance has already been recorded on the recording-destination track, it will be erased as you record your new performance. Use this when you want to re-record.	
Start Point	—	Specify the location (measure-beat-tick) at which recording will begin.

4. Press [F6 (NOTE)] or [▶].

The [●] indicator lights, and the STEP REC screen appears.



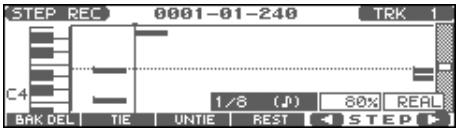
5. Specify the note that you want to input. Use ◀ or ▶ to select the desired parameter.

Parameter	Value	Explanation
Note Type	Note	Specify the length of the notes that you want to input, in terms of a note value. The length of the note value indicates the length from one note-on to the next note-on.
Gate Time	1–100%	Specify the proportion of the gate time relative to the Note Type. The gate time is the length between note-on and note-off. Specify a lower value if you want the notes to be played staccato, or a higher value if you want the notes to be played tenuto, or as a slur. Normally, you will set this to about "80%."
Input Velo	REAL, 1–127	Specify the strength with which the note will be played. If you want this to be the strength with which you actually pressed the key, select "REAL." Otherwise, use settings of p (piano)=60, mf (mezzo forte)=90, or f (forte)=120 as general guidelines.

6. Use the VALUE dial or [INC] [DEC] to make the setting.

7. Press [F5] or [F6] to move to the desired input location, and press a note on the keyboard or a pad.

When you press a key or a pad, the input position will advance by the value of the Note Type you specified. The velocities are displayed as a bar graph.



You can use the function buttons ([F1][F2][F3][F4][F5]) to perform the following operations.

[F1 (BAK DEL)]: Cancel the previously input note.

[F2 (TIE)]: Extend the length of the previously input note by the current setting.

[F3 (UNTIE)]: Cancel the previously input TIE.

[F4 (REST)]: Inputs a rest. First set the Note Type parameter to a length that is the same as the rest you want to input, and then press [F3 (REST)].

8. Repeat the above steps to continue inputting.

TIP

The previous value of each parameter is remembered. This means that if you want to use the same settings as the previously input note, there is no need to change the settings. Once you have set the Gate Time parameter and Input Velocity parameter, it is not normally necessary to change them, so all you have to do is set the Step Time parameter and specify the pitch (note) of each note.

NOTE

The note will not be finalized as long as you hold down the key. This means that you will be able to modify the various parameters of the note (Note Type, Gate Time, Input Velo).

9. When you are finished step recording, press [■].

The [●] indicator will go dark.

TIP

If you are not satisfied with the results of the previous step recording, you can press [ERASE/UNDO] to return to the state prior to recording (Undo/Redo). After executing Undo, you can use Redo to revert to the previous state. After executing Undo, you can execute Redo by performing the above procedure once again.

Inputting a Chord

Press the chord. The cursor will move to the next step when you release all keys or pads.

Moving the input location

Pressing [F6 (>)] will move the input location forward by the current Note Type value.

Pressing [F5 (<)] will move the input location backward by the current Note Type value.

Moving the display region

Pressing ▲ or ▼ will move the displayed region of notes upward or downward.

The Relation between Note Value Length and Gate Time

The relation between the length of the note value and the gate time is shown below. Since the Fantom-Xa's sequencer uses a TPQN (Ticks Per Quarter Note; i.e., resolution) of 480, a quarter note gate time is 480 ticks.

Note	Gate time
𝅘𝅥𝅯	30
𝅘𝅥𝅯3	40
𝅘𝅥𝅯.	45
𝅘𝅥𝅯𝅘𝅥𝅯	60
𝅘𝅥𝅯𝅘𝅥𝅯3	80
𝅘𝅥𝅯𝅘𝅥𝅯𝅘𝅥𝅯	90
𝅘𝅥𝅯𝅘𝅥𝅯𝅘𝅥𝅯𝅘𝅥𝅯	120
𝅘𝅥𝅯𝅘𝅥𝅯3	160
𝅘𝅥𝅯𝅘𝅥𝅯.	180
𝅘𝅥𝅯𝅘𝅥𝅯𝅘𝅥𝅯	240
𝅘𝅥𝅯3	320
𝅘𝅥𝅯.	360
𝅘𝅥𝅯𝅘𝅥𝅯	480
𝅗𝅥3	640
𝅗𝅥.	720
𝅗𝅥	960
𝅝	1920
𝅜	3840

MEMO

The gate time that is recorded in step recording will be the original gate time value multiplied by the value of the Gate Time parameter. For example, if the Gate Time parameter is set to "80%," inputting a quarter note will mean that the gate time is 480 x 0.8=384.

Assigning a Pattern to a Phrase Track

You can create a song by combining previously recorded patterns. This is done using step recording to assign patterns to a phrase track. However, please be aware that the patterns themselves are not placed in the phrase track. Rather, **Pattern Call messages** are placed in the phrase track to specify which pattern should be played back. This means that if you later modify the contents of a pattern, the song playback will also be affected.

NOTE

When you assign a pattern to a phrase track, its pattern beat will be ignored, and the pattern will use the time signature of the beat track. If the pattern beat and the beat track have different settings, the length of the measures will not match, and the playback may become incorrectly aligned. If this occurs, re-specify the time signature of the beat track (p. 123).

1. Make sure that the preparations for recording have been performed as described in "Before You Record a New Song" (p. 122).

2. Press [●] twice, or hold down [SHIFT] and press [●].

The [●] indicator blinks, and the Step Rec Standby window appears.

MEMO

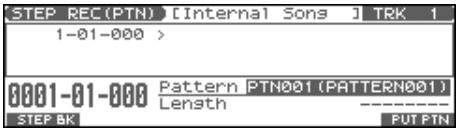
If [PATTERN] is lit, press it so its indicator goes out.

3. Make settings for step recording. Use [CURSOR] to move the cursor to the desired parameter, and use the VALUE dial or [INC] [DEC] to set it.

Parameter	Value	Explanation
Rec Track	TRK 1–TRK 16	Specify the phrase track on which you want to record.
Rec Mode	MIX, REPLACE	Select how recording is to take place.
	MIX: Mix-recording will be carried out. Normally, you will record using this method. If a performance has already been recorded on the recording-destination track, your newly recorded performance will be added to the existing performance without erasing it. **REPLACE:** Replace-recording will be carried out. If a performance has already been recorded on the recording-destination track, it will be erased as you record your new performance. Use this when you want to re-record.	
Start Point	—	Specify the location (measure-beat-tick) at which recording will begin.

4. Press [F5 (PTNCALL)].

The STEP REC (PTN) screen appears.



5. Use the VALUE dial or [INC] [DEC] to select the pattern number (1–100) that you want to assign to the phrase track.

The pattern name of the selected pattern is displayed in "Pattern." "Length" shows the number of measures in the pattern.

6. Press [F6 (PUT PTN)].

A Pattern Call message for the pattern selected by the Pattern parameter will be recorded. You will advance by the length of the measures in that pattern, and will be ready to input the next pattern.

* *If you input the wrong pattern, you can press [◀◀] or [F1 (STEP BK)] to delete the previously input Pattern Call message.*

7. Repeat the above steps to assign additional patterns.

8. When you are finished with step recording, press [EXIT] or [■].

The [●] indicator will go dark.

TIP

If you are not satisfied with the step recording that you just performed, press [ERASE/UNDO] to return to the state prior to recording (Undo/Redo). After executing Undo, you can use Redo to revert to the previous state. After executing Undo, you can execute Redo by performing the above procedure once again.

Editing Songs

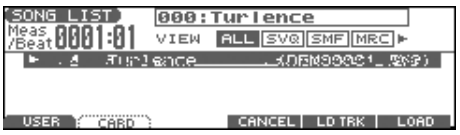
This chapter explains the procedure for editing songs.

Loading the Song You Want to Edit

When you're going to edit a song, you have to first load it into the Temporary Area.

The Temporary Song will be lost if you turn power off or load another song into Temporary Area. If Temporary Area contains a song you wish to keep, you must save that song to user memory or memory card (p. 150).

1. Press [SONG EDIT <-> LIST] twice to access the SONG LIST screen.



* *By pressing ◀ or ▶ in the above screen, you can specify the type of songs that will be displayed. If various types of songs are saved together, it will be easier to find the desired song if you restrict the displayed file types in this way.*

- **ALL:** all songs will be displayed
- **SVQ:** only SVQ files will be displayed
- **SMF:** only Standard MIDI Files will be displayed
- **MRC:** only MRC files will be displayed

2. Press [F1 (USER)] or [F2 (CARD)] to select the loading destination.

3. Use ▲ or ▼ to select the song that you want to edit.

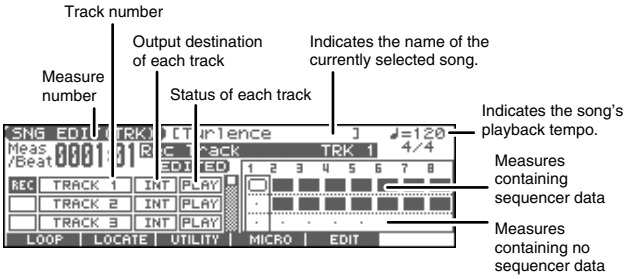
4. Press [F6 (LOAD)].

* *A Message will ask you for confirmation.*

5. Press [F6 (EXEC)].

When the song has finished loading, the performance data of the loaded song will be displayed in the SNG EDIT (TRK) screen.

* *You can also load a song by holding down [SHIFT] and pressing [WRITE] (p. 153).*



MEMO

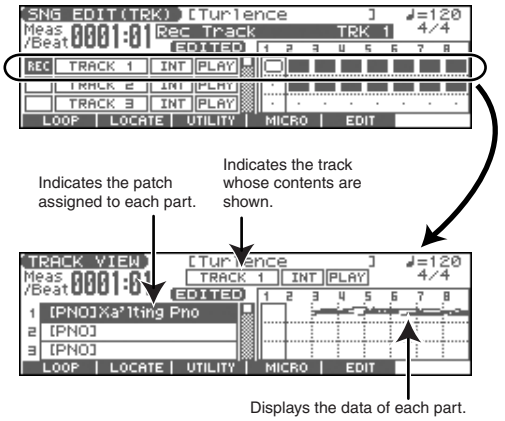
If you play back the song while the SNG EDIT (TRK) screen is displayed, the screen will scroll in keeping with the song playback location.

Viewing the Data within a Track

The Fantom-Xa can record data for multiple MIDI channels in a single track. From the SNG EDIT (TRK) screen, press [PAGE] to see which channel(s) of data are found in each track (the TRACK VIEW screen).

This screen graphically shows the note data of each channel. The height of the bar indicates the note pitch, and the length of the bar indicates the duration.

Press [PAGE] once again to return to the previous screen.



Using Different Sound Generators for Each Track

By specifying the output destination for each track, you can use a variety of sound generators when playing back a song.

1. Press [SONG EDIT <-> LIST] to access the SNG EDIT (TRK) screen.

2. Use [CURSOR] to move the cursor for the track whose output destination you want to specify.

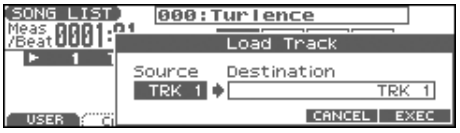
3. By using the VALUE dial or [INC] [DEC], set the value.

- **OFF:** The track will not be sounded.
- **INT:** The track will be sounded by the Fantom-Xa's internal sound generator.
- **MIDI:** The track will be sounded by an external sound generator connected to the MIDI OUT connector.
- **BOTH:** The track will be sounded by both the internal and external sound generators.

Loading Individual Tracks/Patterns of Song Data

If you have selected a song file (extension ".SVQ") or Standard MIDI File (extension ".MID"), you can load individual phrase tracks or patterns.

1. **After step 3 of "Loading the Song You Want to Edit," press [F5 (LD TRK)].**
   The Load Track window appears.



2. **Move the cursor to the left of "Source" (load source), and select the track (TRK 1–16) or pattern (PTN001–100) that you want to load.**

* *If you are loading from a Standard MIDI File, it is not possible to select patterns (PTN001–100). Also, if you are loading from a Format 0 Standard MIDI File, this will be fixed at "TRK ALL," and individual tracks cannot be selected.*

3. **Move the cursor to the right of "Destination" (load destination), and select the load-destination track (TRK 1–16) or pattern (PTN001–100).**

4. **Press [F6 (EXEC)] to execute the operation.**

* *To cancel, press [F5 (CANCEL)].*

Silencing the Playback of a Track (Track Mute)

If you wish to silence specific track during playback, you can mute the appropriate Phrase track containing that sequencer data.

1. **Press [SONG EDIT <-> LIST] to access the SNG EDIT (TRK) screen.**

2. **Use [CURSOR] to move the cursor for the track that you want to silence.**

* *Tracks in which no sequencer data has been recorded are displayed as "- - - -."*

3. **Turn the VALUE dial or press [DEC] to select "MUTE."**

* *You can also mute Phrase tracks by pressing [MUTE] so the button is blinking and pressing PART/TRACK [1]–[8] and [9-16].*

NOTE

Note that if you save a song with a Phrase track muted in the Standard MIDI File format, that Phrase track's data will not be saved. If you save a song that has a muted Phrase track in the MRC Pro song format, the mute status of the track will also be saved.

TIP

If you set the tempo track (Tempo) "Status" to "MUTE," the tempo track will be muted. If tempo changes have been recorded in a song, but you want to play the song at a fixed tempo, you can mute the tempo track.

Assigning Markers (Locate Positions) to a Song

Markers can be assigned to any location in a song. These are called **Locate Positions**. Normally, locations in a song are indicated as "measure-beat-tick," but a locate position is also displayed as an absolute time of "hours:minutes:seconds:frames."

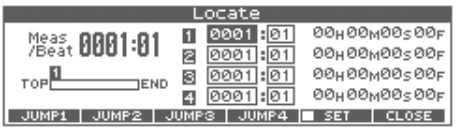
* *It is not possible to assign a locate position to a pattern.*

Assigning a Locate Position

Up to four locate positions can be assigned in each song.

1. **Press [SONG EDIT <-> LIST] to access the SONG EDIT screen.**

2. **Press [F2 (LOCATE)].**
   The Locate screen appears.



3. **Press [F5 (SET)] to add a check mark (✔); then press [F1 (SET1)]–[F4 (SET4)] to assign the current location of the song as a locate position.**
   You can assign a locate position in this way even while listening to the song play back.

* *You can also adjust the locate position by moving the cursor to the "measure" or "beat" value of the locate number and using the VALUE dial or [INC] [DEC] to set each value.*

Moving to a Locate Position

Use the following procedure to change the song location to a Locate Position.

1. **Access the Locate screen.**

2. **If a check mark (✔) is displayed above [F5 (SET)], press it to remove the mark.**

3. **Press [F1 (JUMP1)]–[F4 (JUMP4)].**
   You will move to the specified locate position.

TIP

- Hold down [SHIFT] and press [BWD] to jump to the preceding locate position.
- Hold down [SHIFT] and press [FWD] to jump to the next locate position.

Specifying the Area of a Song that will Repeat (Loop Points)

When using Loop Play or Loop Recording, you can use the loop points you specify here to specify the repeated area, as an alternative to repeating the specified number of measures.

* *It is not possible to assign a loop point to a pattern.*

1. Press [SONG EDIT <-> LIST] to access the SONG EDIT screen.

2. Press [F1 (LOOP)].
The Loop Play window appears.

3. Move the cursor to the desired parameter, and use the VALUE dial or [INC] [DEC] to make the setting.

Parameter	Explanation
Repeat Times	Number of repeats **Value:** INF, 1–99 If you want repetition to continue until you press [STOP], set this to "INF."
Start Point (**S**)	Location at which repetition is to begin If you press [F3 (START)], the current location of the song will be set as the starting location.
End Point (**E**)	Location at which repetition will end If you press [F4 (END)], the current location of the song will be set as the ending location. * *The location you specify here will not be included in the repeated area.*

4. If you press [LOOP PLAY] to make it light, or press [F5 (LOOP)] to add a check mark (✔); looping will be turned on.

Editing Sequencer Data Over the Specified Range (Track Edit)

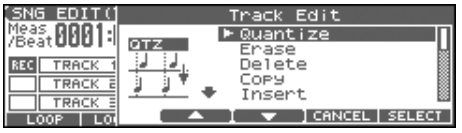
Track Edit lets you edit areas of sequencer data that you specify.

Basic Operation for Track Editing

1. Access the SONG LIST screen, and then load the song you want to edit (p. 131).

2. Press [SONG EDIT <-> LIST] to access the SNG EDIT (TRK) screen.

3. Press [F5 (EDIT)].
The Track Edit window appears.



4. Press [F3 (▲)] [F4 (▼)] or ▲ ▼ to select the desired function, and then press [F6 (SELECT)].

Quantize (p. 134)	Erase (p. 136)	Delete (p. 136)
Copy (p. 137)	Insert (p. 138)	Transpose (p. 138)
Change Velocity (p. 139)	Change Channel (p. 139)	Change Duration (p. 140)
Merge (p. 140)	Extract (p. 141)	Shift Clock (p. 142)
Data Thin (p. 143)	Exchange (p. 143)	Time Fit (p. 143)
Truncate (p. 144)		

cf.

For details on the setting windows of each track editing function, refer to the following explanations of each function.

5. Set the parameters for each function. Press [CURSOR] to move the cursor to the desired parameter, and use the VALUE dial or [INC] [DEC] to set the value. First check the region that is to be affected by the editing operation, and then make corrections if you want to change it.

6. Press [F6 (EXEC)] to execute the operation.
When the operation is completed, the display will briefly indicate "Completed!"

* *If you decide not to execute the operation, press [F5 (CANCEL)].*

MEMO

If you are not satisfied with the results of executing the function, you can press [ERASE/UNDO] to return to the state prior to executing the operation (Undo/Redo). After executing Undo, you can use Redo to revert to the previous state. After executing Undo, you can execute Redo by performing the above procedure once again.

Aligning a Song's Timing (Quantize)

In the chapter **"Recording Songs"** (p. 122), we explained **Recording Quantize**, which lets you quantize during realtime recording. Alternatively, it is also possible to quantize a song that has already been recorded.

The Fantom-Xa has a **Preview function** that allows playing back the results of a Quantize operation while you are still setting parameters (before actual execution). This helps to make optimal Quantize settings.

Preview Function

The Preview function allows you to hear how quantizing will work while you are still setting Quantize parameters (before you execute operation). If you modify parameter values during preview playback, the next preview playback will include those latest value changes. Try various parameter settings to find the one that works best.

* *Pattern Call events assigned to a phrase track or muted phrase tracks cannot be previewed.*

Pressing [PLAY] when the Quantize window is displayed selects Preview mode. The two measures from the current location of the song will play back repeatedly. The preview start location can also be specified by pressing [FWD] or [BWD]. To exit Preview mode, press [STOP].

NOTE

The Quantize operation will correct only the timing at which notes were pressed (note-on) and released (note-off), and will not correct any other sequencer data. This means that if you record MIDI messages such as bend range or modulation along with notes, quantization can cause the notes to go out of sync with the MIDI messages, skewing timing. To avoid such problems it is better to record non-keyboard data afterward, using mix recording, etc.

cf.

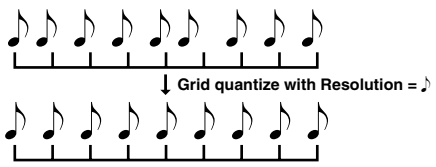
For details on the settings, refer to **Basic Operation for Track Editing** (p. 133).

Parameter	Value	Explanation
Track/ Pattern	TRK ALL, TRK 1–16, PTN001–100	Phrase track(s) or pattern to be quantized **TRK ALL:** Phrase tracks 1–16 **TRK 1–16:** Specified phrase track **PTN001–100:** Specified pattern

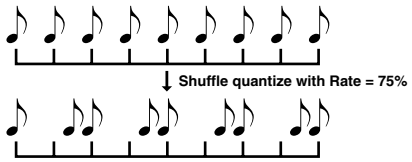
Parameter	Value	Explanation
Ch/Part	ALL, Ch 1–16	MIDI channel(s) of the notes to be quantized **ALL:** Quantizes all notes. **Ch 1–16** Quantizes only the notes of a specific MIDI channel.
Measure	0001–	Range of measures to be quantized If you set "For" to "ALL," all measures will be specified.
For	1–ALL	
Quantize Type	GRID,SHUFFLE, TEMPLATE	(See below.)
When "Quantize Type" is "**GRID**" Since the notes will be adjusted to the timing of the specified note value, you can use this when you want drums or bass (for example) to play in an accurate rhythm.		
Resolution	𝅘𝅥𝅯, 𝅘𝅥𝅯₃, 𝅘𝅥𝅮, 𝅘𝅥𝅮₃, ♪, ♩₃, ♩	Quantization time interval Choose a Resolution that matches the smallest note in the area you're quantizing.
Strength	0–100%	Percentage of how note timing will be corrected toward the timing interval specified by Resolution
	With a setting of "100%," the note will move all the way to the nearest timing interval of the Resolution setting. A setting of "0%" will not change note timing at all.	
When "Quantize Type" is "**SHUFFLE**" Use this when you want to produce a "shuffle" or "swing" rhythmic feel.		
Resolution	𝅘𝅥𝅮, ♪	Quantization time interval
Rate	0–100%	How far apart you want a down-beat specified by Resolution to be from the up-beat that immediately follows
	By shifting the timing of an up-beat, you can create a "swing" feel. A setting of "50%" will place the timing of the up-beat note at the exact mid point between the down-beat and the next down-beat. A setting of "0%" will move the up-beat note to the same timing as the previous down-beat. A setting of "100%" will move it to the same timing as the following down-beat.	
When "Quantize Type" is "**TEMPLATE**" The Fantom-Xa provides 71 quantize templates. These templates contain various quantize settings for applying rhythmic `feels' of many different musical categories. Select the template you want for quantization. * If your sequencer data notes are too far off from accurate time, Template Quantize may not work that efficiently so you won't achieve the desired results. If this is the case, apply Grid Quantize to your sequencer data first to lose timing mistakes.		
Template	001–071	Template you wish to use
Timing	0–100%	How much a note will move toward the timing interval of the template At a setting of 100%, the note will be perfectly timed with the template. At a setting of 0%, the note will not move at all.

Parameter	Value	Explanation
Range Min	0 (C -)–127 (G9)	Range of note numbers to be quantized You can also specify the key range by pressing keys on the keyboard.
Range Max		

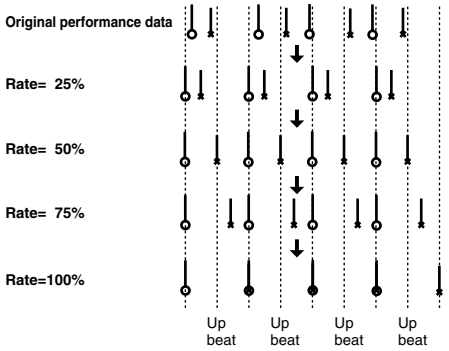
When Quantize Type is "GRID"



When Quantize Type is "SHUFFLE"



Rate:



When Quantize Type is "TEMPLATE"

Here is a list of quantize templates.

No.	Explanation
001	Dance (small dynamics)
002	Dance (large dynamics)
003	Dance (light swing)
004	Dance (heavy swing)
005	Dance (dragging beats, small dynamics)
006	Dance (dragging beats, large dynamics)
007	Dance (dragging beats, light swing)
008	Dance (dragging beats, heavy swing)
009	Dance (pushing beats, small dynamics)
010	Dance (pushing beats, large dynamics)
011	Dance (pushing beats, light swing)
012	Dance (pushing beats, heavy swing)
013	Fusion (small dynamics)
014	Fusion (large dynamics)
015	Fusion (light swing)
016	Fusion (heavy swing)
017	Fusion (dragging beats, small dynamics)
018	Fusion (dragging beats, large dynamics)
019	Fusion (dragging beats, light swing)
020	Fusion (dragging beats, heavy swing)
021	Fusion (pushing beats, small dynamics)
022	Fusion (pushing beats, large dynamics)
023	Fusion (pushing beats, light swing)
024	Fusion (pushing beats, heavy swing)
025	Reggae (small dynamics)
026	Reggae (large dynamics)
027	Reggae (light swing)
028	Reggae (heavy swing)
029	Reggae (dragging beats, small dynamics)
030	Reggae (dragging beats, large dynamics)
031	Reggae (dragging beats, light swing)
032	Reggae (dragging beats, heavy swing)
033	Reggae (pushing beats, small dynamics)
034	Reggae (pushing beats, large dynamics)
035	Reggae (pushing beats, light swing)
036	Reggae (pushing beats, heavy swing)
037	Pops (small dynamics)
038	Pops (large dynamics)
039	Pops (light swing)
040	Pops (heavy swing)
041	Pops (dragging beats, small dynamics)
042	Pops (dragging beats, large dynamics)
043	Pops (dragging beats, light swing)
044	Pops (dragging beats, heavy swing)
045	Pops (pushing beats, small dynamics)
046	Pops (pushing beats, large dynamics)
047	Pops (pushing beats, light swing)
048	Pops (pushing beats, heavy swing)
049	Rhumba (small dynamics)
050	Rhumba (large dynamics)
051	Rhumba (light swing)
052	Rhumba (heavy swing)
053	Rhumba (dragging beats, small dynamics)
054	Rhumba (dragging beats, large dynamics)
055	Rhumba (dragging beats, light swing)
056	Rhumba (dragging beats, heavy swing)
057	Rhumba (pushing beats, small dynamics)
058	Rhumba (pushing beats, large dynamics)
059	Rhumba (pushing beats, light swing)
060	Rhumba (pushing beats, heavy swing)
061	Samba (for Pandeiro, etc.)
062	Samba (for Surdo, Timbale)
063	Axe (for Caixa)
064	Axe (for Surdo)
065	Salsa (for Cascala)
066	Salsa (for Conga)
067	Triplets
068	Quintuplets
069	Sextuplets
070	Septuplets over two beats
071	Lagging triplets

* *The templates are designed for a 4/4 time signature. Applying them to a performance of a different time signature may not produce the desired result.*

* *The style names shown here are only for your convenience; they are not intended to imply that the templates are usable only for the named style. You can certainly try them with other styles of music.*

Erasing Unwanted Performance Data (Erase)

This function erases all the sequencer data inside the specified area. As the erased data is replaced by rests, the original measures will remain.

cf. For details on the settings, refer to **Basic Operation for Track Editing** (p. 133).

Parameter	Value	Explanation
Track/Pattern	TRK ALL, TRK 1–16, TEMPO, PTN001–100	Track(s) or pattern to be erased **TRK ALL:** Phrase tracks 1–16, the beat track, and the tempo track **TRK 1–16:** Specified phrase track **TEMPO:** Tempo track **PTN001–100:** Specified pattern
Ch/Part	ALL, Ch 1–16	MIDI channel of the data to be erased **ALL:** Erases all sequencer data. **Ch 1–16:** Erases sequencer data of one specific MIDI channel only. * *If you set "Track" to "TEMPO," or if "Status" is set to "System Exclusive," "Tune Request" or "Pattern Call," this parameter will not be available.*
Measure For	0001– 1–ALL	Range of measures to be erased If you set "For" to "ALL," all measures will be specified.
Status	ALL, Note, Poly Aftertouch, Control Change, Program Change, Channel Aftertouch, Pitch Bend, System Exclusive, Tune Request, Pattern Call	Type of data to be erased * *If "Track" is set to "TEMPO," this parameter will not be available.*
When "Status" is "Note" or "Poly Aftertouch"		
Range Min Range Max	0 (C -)–127 (G9)	Range of note numbers to be erased You can also specify the key range by pressing keys on the keyboard.
When "Status" is "Control Change"		
Range Min Range Max	0–127	Range of controller numbers to be erased
When "Status" is "Program Change"		
Range Min Range Max	1–128	Range of program numbers to be erased

This function deletes a specified area of sequencer data, and moves the subsequent data to fill the gap. As a result, the measure length will be shortened by the number of deleted measures.

cf. For details on the settings, refer to **Basic Operation for Track Editing** (p. 133).

Copying Phrases (Copy)

This function copies a specified area of sequencer data. It is convenient for repeating the same phrase several times. You can copy patterns to a phrase track, or copy data from a phrase track to a pattern.

cf.
For details on the settings, refer to **Basic Operation for Track Editing** (p. 133).

Parameter	Value	Explanation
Src Track/ Pattern	TRK ALL, TRK 1–16, TEMPO, PTN001–100	Copy-source track(s) or pattern
	TRK ALL: Phrase tracks 1–16, the beat track, and the tempo track **TRK 1–16:** Specified phrase track **TEMPO:** Tempo track **PTN001–100:** Specified pattern	
Ch/Part	ALL, Ch 1–16	MIDI channel of the data to be copied
	ALL: Copies all the sequencer data. **Ch 1–16:** Copies only the sequencer data of a specific MIDI channel. * *If you set "Src Track" to "TEMPO," or if "Status" is set to "System Exclusive," "Tune Request" or "Pattern Call," this parameter will not be available.*	
Src Measure	0001–	Range of copy-source measures If you set "For" to "ALL," all measures will be specified.
For	1–ALL	
Dst Track/ Pattern	TRK ALL, TRK 1–16, TEMPO, PTN001–100	Check/modify the copy-destination track or pattern.
	TRK ALL: Phrase tracks 1–16, the beat track, and the tempo track **TRK 1–16:** Specified phrase track **TEMPO:** Tempo track **PTN001–100:** Specified pattern * *If you set "Src Track" to "ALL," this parameter can be set to either "ALL" or "PTN001–PTN100." If you select "PTN001–PTN100," the data from the 16 phrase tracks will be merged as it is copied.* * *If "TEMPO" is selected as "Src Track," then only "TEMPO" can be selected for this parameter.*	
Dst Measure	0001–END	Copy-destination measure * *If you want the copy destination to be right after the last measure of a song, set this parameter to "END."*
Copy Mode	MIX, REPLACE	Specifies whether you want to preserve the existing data in the copy destination when copying.
	MIX: Combines the data from the copy source with the existing data in the copy destination. **REPLACE:** Musical data in the copy destination will be erased (i.e., overwritten) when the copy takes place. Only the sequencer data of the MIDI channels specified by the Channel parameter will be overwritten, and data of other MIDI channels will remain.	
Copy Times	1–999	Number of times that the data will be copied to the copy destination
Status	ALL, Note, Poly Aftertouch, Control Change, Program Change, Channel Aftertouch, Pitch Bend, System Exclusive, Tune Request, Pattern Call	Type of data to be copied * *If "Src Track" is set to "TEMPO," this parameter will not be available.*
When "Status" is "Note" or "Poly Aftertouch"		
Range Min	0 (C -)–127 (G9)	Range of note numbers to be copied You can also specify the key range by pressing keys on the keyboard.
Range Max		
When "Status" is "Control Change"		
Range Min	0–127	Range of controller numbers to be copied
Range Max		
When "Status" is "Program Change"		
Range Min	1–128	Range of program numbers to be copied
Range Max		

Inserting a Blank Measure (Insert)

This function inserts blank measures into a specified song position. As you can set the time signature of the blank measures, this is convenient when inserting a phrase having a different time signature in the middle of a song.

cf.

For details on the settings, refer to **Basic Operation for Track Editing** (p. 133).

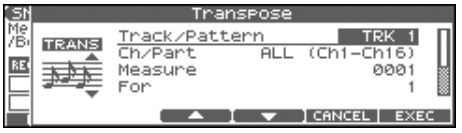
Parameter	Value	Explanation
Track/Pattern	TRK ALL, TRK 1–16, TEMPO, PTN001–100	Track(s) or pattern into which blank measures will be inserted
	TRK ALL: Phrase tracks 1–16, the beat track, and the tempo track **TRK 1–16:** Specified phrase track **TEMPO:** Tempo track **PTN001–100:** Specified pattern	
Measure	0001–END	Measure location at which the blank measures are to be inserted
For	1–	Number of blank measures to be inserted
Beat	Numerator: 1–32 Denominator: 2, 4, 8, 16	In general, the time signature of the measure immediately before insertion will be used for the blank measures. To change the time signature of the blank measures to be inserted, use this parameter. * *Beat can be specified only when you have set "Track" to "TRK ALL."*

Transpose the Key (Transpose)

This transposes the pitch of notes within a specified area, over a +/- 127 semitone range. Use this function to modulate from one key to another in a song, or to transpose the entire song.

cf.

For details on the settings, refer to **Basic Operation for Track Editing** (p. 133).



Parameter	Value	Explanation
Track/Pattern	TRK ALL, TRK 1–16, PTN001–100	Phrase track(s) or pattern to be transposed
	TRK ALL: Phrase tracks 1–16 **TRK 1–16:** Specified phrase track **PTN001–100:** Specified pattern	
Ch/Part	ALL, Ch 1–16	MIDI channel(s) of the notes to be transposed
	ALL: Transposes all notes. **Ch 1–16:** Transposes only the notes of a specific MIDI channel.	
Measure	0001–	Range of measures to be transposed If you set "For" to "ALL," all measures will be specified.
For	1–ALL	
Range Min	0 (C -)–127 (G9)	Range of note numbers to be transposed You can also specify the key range by pressing keys on the keyboard.
Range Max		
Bias	-127– +127	Transpose amount in semitone steps Set a "+" (positive) value to raise the pitch, or a "-" (negative) value to lower the pitch.

If You Want to Lower the Bass Sound One Octave...

If your bass is played one octave higher than the staff notation, use the Transpose function to lower it one octave.

To lower the bass sound one octave, set the Range parameter to "Lowest-Highest" for the bass part, and set the Bias parameter to "-12."

When You Want to Change Percussion Sounds...

You can also use the Transpose function to change percussion sounds.

Suppose you want to change conga to tom. If the conga sound is assigned to the D4 key, and the tom sound is assigned to the C3 key, set the Range parameter to "D4–D4" and the Bias parameter to "-14."

Changing the Velocity (Volume) (Change Velocity)

This function changes the keyboard playing dynamics (velocity) of a specified note area.

cf.

For details on the settings, refer to **Basic Operation for Track Editing** (p. 133).

Parameter	Value	Explanation
Track/Pattern	TRK ALL, TRK 1–16, PTN001–100	Phrase track(s) or pattern whose velocity will be changed
	TRK ALL: Phrase tracks 1–16 **TRK 1–16:** Specified phrase track **PTN001–100:** Specified pattern	
Ch/Part	ALL, Ch 1–16	MIDI channel(s) of notes for which velocity will be changed
	ALL: Changes velocity for all notes. **Ch 1–16:** Changes the velocity for only the notes of a specific MIDI channel.	
Measure	0001–	Range of measures whose velocity will be changed If you set "For" to "ALL," all measures will be specified.
For	1–ALL	
Bias	-99– +99	Adds a fixed bias amount to all velocities.
Magnify	0–200%	Set this parameter if increases or decreases in velocity variations are desired. For less velocity variation, use settings of "99%" or less. For more velocity variation, set it to "101%" or greater. With a setting of "100%," velocity values do not change.
Range Min	0 (C -)–127 (G9)	Range of note numbers for which velocity will be changed You can also specify the key range by pressing keys on the keyboard.
Range Max		

Changing the MIDI Channel (Change Channel)

This function transfers the MIDI channel of a specified area of sequencer data into a different MIDI channel.

cf.

For details on the settings, refer to **Basic Operation for Track Editing** (p. 133).

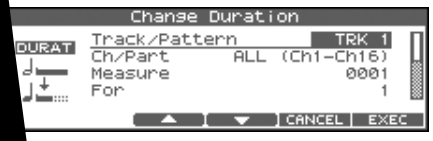
Parameter	Value	Explanation
Track/Pattern	TRK ALL, TRK 1–16, PTN001–100	Phrase track(s) or pattern in which the MIDI channel will be changed
	TRK ALL: Phrase tracks 1–16 **TRK 1–16:** Specified phrase track **PTN001–100:** Specified pattern	
Measure	0001–	Range of measures in which the MIDI channel will be changed If you set "For" to "ALL," all measures will be specified.
For	1–ALL	
Status	ALL, Note, Poly Aftertouch, Control Change, Program Change, Channel Aftertouch, Pitch Bend	Type of data for which you wish to change the MIDI channel
When "Status" is "Note" or "Poly Aftertouch"		
Range Min	0 (C -)–127 (G9)	Range of note numbers for which the MIDI channel will be changed You can also specify the key range by pressing keys on the keyboard.
Range Max		
When "Status" is "Control Change"		
Range Min	0–127	Range of controller numbers for which the MIDI channel will be changed
Range Max		
When "Status" is "Program Change"		
Range Min	1–128	Range of program numbers for which the MIDI channel will be changed
Range Max		
Src Channel	ALL, Ch 1–16	Set Src Channel to the MIDI channel that you want to change, and set Dst Channel to the MIDI channel to which it will be changed. If you set "Src Channel" to "ALL," the sequencer data of all MIDI channels will be combined into "Dst Channel."
Dst Channel	Ch 1–16	

Changing the Length of Notes (Change Duration)

This function changes the duration (time from note-on to note-off) of notes within a specified area. Depending on the setting, you can also apply staccato or tenuto.

cf.

For details on the settings, refer to **Basic Operation for Track Editing** (p. 133).



Parameter	Value	Explanation
Track/Pattern	TRK ALL, TRK 1–16, PTN001–100	Phrase track(s) or pattern whose durations will be changed
	TRK ALL: Phrase tracks 1–16 **TRK 1–16:** Specified phrase track **PTN001–100:** Specified pattern	
Ch/Part	ALL, Ch 1–16	MIDI channel(s) of notes for which duration will be changed
	ALL: Changes the duration for notes on all MIDI channels. **Ch 1–16:** Changes the duration for notes on a specific MIDI channel only.	
Measure	0001–	Range of measures in which durations will be changed
For	1–ALL	If you set "For" to "ALL," all measures will be specified.
Bias	-4800–4800	Adds a fixed amount to all durations.
Magnify	0–200%	Set this parameter if you wish to increase or decrease durations by a specified ratio.
Range Min		Specify the range of numbers for which duration will be changed You can also specify the key range by pressing keys on the keyboard.
Range Max		

Combining Two Phrase Tracks or Patterns into One (Merge)

This lets the contents of two phrase tracks or patterns will be combined into one.

cf.

For details on the settings, refer to **Basic Operation for Track Editing** (p. 133).

Parameter	Value	Explanation
Src Track/Pattern	TRK 1–16, PTN001–100	Phrase track or pattern to be merged
	TRK 1–16: Specified phrase track **PTN001–100:** Specified pattern *After the Merge operation has been executed, no sequencer data will remain in this track.*	
Dst Track/Pattern	TRK 1–16, PTN001–100	Destination phrase track or pattern
	TRK 1–16: Specified phrase track **PTN001–100:** Specified pattern *After the operation has been executed, the data will be combined into this track.*	

Extracting and Moving a Part of Sequencer Data (Extract)

This function extracts a specified sequencer data area from a phrase track or pattern and moves it to the same Song position of another phrase track or pattern. Additionally, just as with Standard MIDI File Format 0, when sequencer data from multiple MIDI channels is recorded on one track, you can also assign one MIDI channel to a single phrase track.

cf.

For details on the settings, refer to **Basic Operation for Track Editing** (p. 133).

Parameter	Value	Explanation
Src Track/ Pattern	TRK 1–16, PTN001–100	Phrase track or pattern from which the sequencer data will be extracted **TRK 1–16:** Specified phrase track **PTN001–100:** Specified pattern * *After Extract is executed, the selected sequencer data no longer remains on this phrase track or pattern.*
Ch/Part	ALL, Ch 1–16	MIDI channel(s) of the data to be extracted **ALL:** Extracts all sequencer data. **Ch 1–16:** Extracts just the sequencer data of a specific MIDI channel. * *If you set "Status" to "System Exclusive," "Tune Request" or "Pattern Call," this parameter will not be available.*
Measure	0001–	Range of measures from which sequencer data will be extracted If you set "For" to "ALL," all measures will be specified.
For	1–ALL	
Dst Track/ Pattern	TRK ALL, TRK 1–16, PTN001–100	Move-destination track or pattern **TRK ALL:** According to its MIDI channel, the sequencer data will be divided among phrase tracks 1–16. **TRK 1–16:** Specified phrase track **PTN001–PTN100:** Specified pattern
Extract Mode	MIX, REPLACE	Specifies whether you want to keep the sequencer data at the destination. **MIX:** The data at the destination will combine with the extracted data. **REPLACE:** The data at the destination will be erased and replaced by the extracted data. Only the sequencer data of the MIDI channel specified by the Channel parameter will be the object of the operation. Sequencer data of all other MIDI channels will be unaffected.
Status	ALL, Note, Poly Aftertouch, Control Change, Program Change, Channel Aftertouch, Pitch Bend, System Exclusive, Tune Request, Pattern Call	Type of data to be extracted
When "Status" is "Note" or "Poly Aftertouch"		
Range Min	0 (C -)–127 (G9)	Range of note numbers to be extracted You can also specify the key range by pressing keys on the keyboard.
Range Max		
When "Status" is "Control Change"		
Range Min	0–127	Range of controller numbers to be extracted
Range Max		
When "Status" is "Program Change"		
Range Min	1–128	Range of program numbers to be extracted
Range Max		

Shifting Performance Data Forward and Back (Shift Clock)

This function shifts the timing of sequencer data backward or forward in time within a specified area in steps of 1 tick. Slight shifts of timing can speed up or drag performance.

* *When this function is executed, data that would be moved to a point before the beginning of the song will automatically shift to the beginning of the song. If data would be moved to a point past the end of the song, additional new measures will be created automatically as needed. The time signature of the newly created measures will be the same as that of the measure immediately preceding.*

cf.

For details on the settings, refer to **Basic Operation for Track Editing** (p. 133).

Parameter	Value	Explanation
Track/Pattern	TRK ALL, TRK 1–16, TEMPO, PTN001–100	Track(s) or pattern whose sequencer data will be moved in units of one tick
	ALL: Phrase tracks 1–16, the beat track, and the tempo track **TRK 1–16:** Specified phrase track **TEMPO:** Tempo track **PTN001–100:** Specified pattern	
Ch/Part	ALL, Ch 1–16	MIDI channel of the data to be shifted in time
	ALL: Shifts ticks of all sequencer data. **Ch 1–16:** Shifts the sequencer data tick of just one specific MIDI channel. * *If you set "Track" to "TEMPO," or if "Status" is set to "System Exclusive," "Tune Request" or "Pattern Call," this parameter will not be available.*	
Measure	0001–	Range of measures in which the sequencer data will be moved in units of one tick. If you set "For" to "ALL," all measures will be specified.
For	1–ALL	
Bias	-4800–4800	Amount (number of ticks) by which the sequencer data will be moved
Status	ALL, Note, Poly Aftertouch, Control Change, Program Change, Channel Aftertouch, Pitch Bend, System Exclusive, Tune Request, Pattern Call	Type of data to be shifted in time * *If "Track" is set to "TEMPO," this parameter will not be available.*

Parameter	Value	Explanation
When "Status" is "Note" or "Poly Aftertouch"		
Range Min	0 (C -)–127 (G9)	Range of note numbers to be shifted You can also specify the key range by pressing keys on the keyboard.
Range Max		
When "Status" is "Control Change"		
Range Min	0–127	Range of controller numbers to be shifted
Range Max		
When "Status" is "Program Change"		
Range Min	1–128	Range of program numbers to be shifted
Range Max		

Thinning Out the Sequencer Data (Data Thin)

Continuously variable controllers such as aftertouch, pitch bend, and expression tend to create unexpectedly large amounts of data when operated. Data Thin will strip out redundant data to increase the amount of memory available for the sequencer.

cf.

For details on the settings, refer to **Basic Operation for Track Editing** (p. 133).

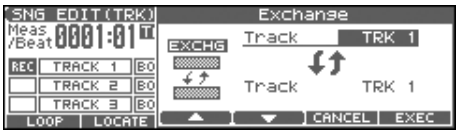
Parameter	Value	Explanation
Track/ Pattern	TRK ALL, TRK 1–16, PTN001–100	Phrase track(s) or pattern whose sequencer data will be thinned
	TRK ALL: Phrase tracks 1–16 **TRK 1–16:** Specified phrase track **PTN001–100:** Specified pattern	
Ch/Part	ALL, Ch 1–16	MIDI channel of the data to be thinned
	ALL: Thins all sequencer data. **Ch 1–16:** Thins sequencer data of just one specific MIDI channel.	
Measure	0001–	Range of measures whose sequencer data will be thinned If you set "For" to "ALL," all measures will be specified.
For	1–ALL	
Data Thin Value	0–99	For thinning data which incorporates rapid changes, use higher settings.
Data Thin Time	1–999	If you are thinning data that changes gradually over time, use higher settings.
Status	ALL, Poly Aftertouch, Control Change, Channel Aftertouch, Pitch Bend	Type of data to be thinned
When "Status" is "Poly Aftertouch"		
Range Min	0 (C -)–127 (G9)	Range of note numbers to be thinned You can also specify the key range by pressing keys on the keyboard.
Range Max		
When "Status" is "Control Change"		
Range Min	0–127	Range of controller numbers to be thinned
Range Max		

Swapping Two Phrase Tracks or Patterns (Exchange)

The phrase tracks or patterns will be exchanged in their entirety.

cf.

For details on the settings, refer to **Basic Operation for Track Editing** (p. 133).



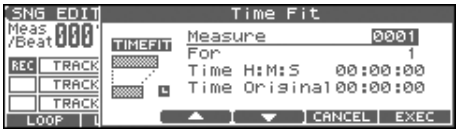
TRK 1–16: Specified phrase track
PTN001–100: Specified pattern

Adjusting the Song's Playback Time (Time Fit)

This function calculates the playback time of a song or allows you to modify the tempo track data so that the song will play back in a specified time.

cf.

For details on the settings, refer to **Basic Operation for Track Editing** (p. 133).



Parameter	Value	Explanation
Measure	0001–	Measure the playback time, or check/modify the range of measures to be adjusted. If you set "For" to "ALL," all measures will be specified.
For	1–ALL	
Time H/M/S	—	The playback time will be displayed. From left to right, the time display indicates "hours: minutes: seconds."

* *Time Original: Current playback time*

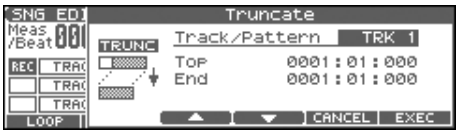
Deleting Blank Measures (Truncate)

Copying or merging may sometimes create blank measures at the beginning of a phrase track or pattern. Truncate deletes silent portions from the beginning of the specified phrase track to the first note-on.

* *If other sequencer data (such as program changes or control changes) is recorded between the beginning and the first note-on of the specified phrase track, only the last data event of each type will be placed before the note-on.*

cf.

For details on the settings, refer to **Basic Operation for Track Editing** (p. 133).



Parameter	Value	Explanation
Track/Pattern	TRK 1–16, PTN001–100	Phrase track or pattern from which blank measures will be deleted
	TRK 1–16: Specified phrase track **PTN001–100:** Specified pattern	

Below the Track/Pattern parameter is displayed the location of the beginning of the specified track, and the position of the first note-on.

Editing Individual Items of Sequencer Data (Micro Edit)

Micro Edit lets you edit individual items of sequencer data recorded in a song, such as MIDI messages and tempo data.

* *When you're going to edit a song, you have to first load it into the Temporary Area (p. 131).*

Editing Sequencer Data (Basic Procedure in the Microscope)

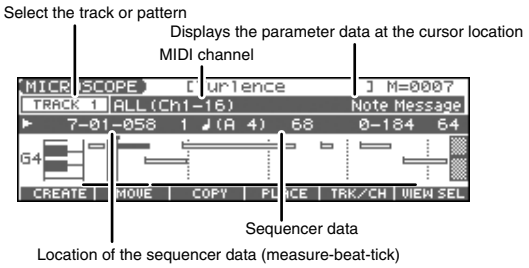
Access the Microscope screen when you want to view the sequencer data recorded in a song. Each line indicates the location (measure-beat-tick) at which the sequencer data is recorded, and the data recorded at that location.

1. Load the song that contains the sequencer data you want to view/edit (p. 131).

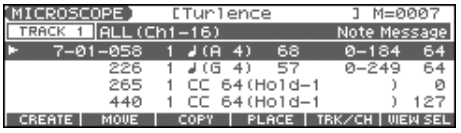
2. Press [F4 (MICRO)].

The MICROSCOPE screen appears.

Press ▲ or ▼ to view sequencer data.

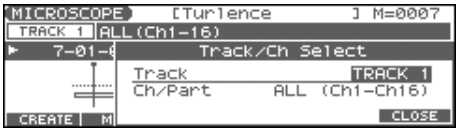


* *Each time you press [PAGE] you will switch between the two screens.*



3. Press [F5 (TRK/CH)].

The Track/Ch Select window appears.



MEMO

If you want to edit a pattern, press [PATTERN] to make it light.

4. Press ▲ to move the cursor to "Track," and select the track or pattern whose sequencer data you want to view/edit.

TRACK 1–TRACK16: Specified phrase track
TEMPO: Tempo track
BEAT: Beat track
PTN001–PTN100: Specified pattern (pattern mode only)

cf.

For an explanation of each type of sequencer data, refer to "Sequencer Data Handled by a Phrase Track/Pattern," below.

5. Press ▼ to move the cursor to "Ch/Part," and select the MIDI channel of the sequencer data that you want to view.

6. Press [F6 (CLOSE)] to close the window.

7. Use ▲ ▼ or the VALUE dial to select the performance data that you want to edit.

8. Press ◀ or ▶ to select the parameter that you want to edit.

9. Use the VALUE dial or [INC] [DEC] to set the value.

TIP

When editing the Note Number of note or polyphonic aftertouch data, or the On Velocity or Off Velocity of a note, you can also specify the value by playing a key on the keyboard.

- When you press [ENTER], the sequencer data currently shown at the " ⊢ " will be transmitted from the MIDI OUT connector. In the case of a note message, the note will sound when you press [ENTER].

cf.

If you want to edit a system exclusive message, refer to "Editing a System Exclusive Message," below.

10. To close the MICROSCOPE screen, press [EXIT].

Editing a System Exclusive Message

1. Use ▲ ▼ or the VALUE dial to select the system exclusive message that you want to edit.

2. Press ▶.

The System Exclusive Edit screen appears.

3. Press [CURSOR] to move the cursor to the data you want to edit.

4. Use the VALUE dial or [INC] [DEC] to edit the value.

- If you want to add data between "F0:" and ":F7," move the cursor to that location and press [F3 (INS)]. A value of "00" will be inserted. Change this to the desired value.
- To delete data, move the cursor to the relevant location and press [F2 (DEL)].

5. When you are finished editing, press [F6 (EXEC)] to finalize the values of the system exclusive message.

* *To cancel, press [F5 (CANCEL)].*

TIP

If you decide to discard the changes you made to the system exclusive message and return to the MICROSCOPE screen, press [EXIT].

- In the case of a Roland type IV system exclusive message, the checksum can be calculated automatically when you finalize the values. If you do not want to calculate the checksum automatically, press [F1 (AT SUM)] to remove the check mark (✔).
- When you press [F4 (TEST)], the system exclusive message you are editing will be transmitted from the MIDI OUT connector.

Sequencer Data Handled by a Phrase Track/Pattern

Phrase tracks or patterns can record the following nine types of sequencer data. The recorded location (measure-beat-tick) is displayed at the far left of each data item, and the MIDI channel number is displayed beside it.

Note (♩)

These MIDI messages represent notes. From the left, the parameters are Note Number, which indicates the name of the note; On Velocity, which specifies the force with which the key is pressed; Duration, which specifies the duration of the note; and Off Velocity, which determines the speed with which the key is released.

Program Change

This MIDI message switches sounds. The program number (PC#) selects the sound.

Control Change

This MIDI message applies various effects such as modulation or expression. The controller number (CC#) selects the function, and Value specifies the depth of the effect.

Pitch Bend

This MIDI message changes the pitch. The value specifies the amount of pitch change.

Poly Aftertouch

This MIDI messages applies aftertouch to an individual note. From the left, the parameters are Note Number which specifies the key, and Value which specifies the depth of the aftertouch.

Channel Aftertouch

This MIDI message applies aftertouch to an entire MIDI channel. Value specifies the depth of the aftertouch.

Tune Request

This MIDI message causes an analog synthesizer to tune itself.

System Exclusive

These are MIDI messages used to make settings unique to the Fantom-X, such as sound settings. Input the data between "F0" and "F7."

Pattern Call

This is data that causes a pattern to play back. Use the Number parameter to select the pattern number. The pattern name is shown in parentheses ( ).

NOTE

If the pattern called by the Pattern Call message extends beyond the last measure of the song, the pattern playback will be interrupted at that point.

* *Only one pattern can be played at a time by Pattern Call messages in a given phrase track. This means that if a Pattern Call message is recorded at a location before the previous pattern has finished playing, the pattern that was playing will be interrupted, and the next pattern will begin playing. If more than one Pattern Call message is recorded at the same location, the message that is displayed last in the Microscope screen will be played.*

* *Although it is possible to record Pattern Call messages in a pattern, they will not be played. If you want to place the data of another pattern into a pattern, use Track Edit to copy the data.*

Data Handled by the Tempo Track

The Tempo track records tempo data for the song.

Tempo Change

This data specifies the tempo. The song will play back according to the "Value" of the tempo change.

The value displayed in "♩= **" is the tempo at which the song will actually play (the playback tempo), and can be changed only in the PLAY screen of each mode.

* *If the tempo change value differs from the playback tempo, this means that the playback tempo has been changed temporarily. In other words, since the tempo change value has not been rewritten, this setting will be lost if you select another song or turn off the power. If you want to play back at this tempo the next time as well, you must re-save the song to disk. This will rewrite the tempo change value so that it matches the playback tempo.*

Data Handled by the Beat Track

The Beat track records time signature data.

Beat Change

This specifies the time signature (Beat).

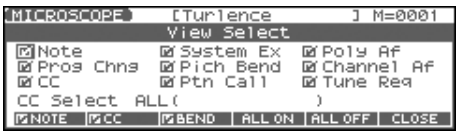
Viewing Sequencer Data (View)

Since a phrase track or pattern contains a large amount of sequencer data, the display may be cluttered and difficult to read. For this reason, the Fantom-Xa lets you specify the type(s) of sequencer data that will be displayed in the screen. This is convenient when you want to check or edit only a specific type of sequencer data.

1. Access the MICROSCOPE screen.

2. Press [F6 (VIEW SEL)].

The View Select window appears.



3. Use [CURSOR] to select the sequencer data that will be displayed.

Note messages	System Exclusive	Poly Aftertouch
Program Change	Pitch Bend	Channel Aftertouch
Control Change	Pattern Call	Tune Request
CC Select Specifies the controller number that will be displayed.		

4. Press [INC] or [DEC] to switch.

The message will be displayed if the check mark (✔) is assigned, and will not be displayed if the check mark is removed.

- [F4 (ALL ON)]:All of the sequencer data will be displayed
- [F5 (ALL OFF)]:None of the sequencer data will be displayed

5. Press [F6 (CLOSE)] to close the View Select window.

Inserting Sequencer Data (Create)

You can insert new sequencer data into a desired location of a phrase track or pattern.

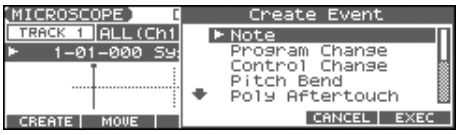
cf.

For details on the sequencer data that can be inserted, refer to **Sequencer Data Handled by a Phrase Track/Pattern** (p. 145).

1. **Access the MICROSCOPE screen for the track or pattern into which you want to insert data (p. 144).**

2. **Press [F1 (CREATE)].**

The Create Event window appears.



3. **Press ▲ ▼ to select the data that will be inserted.**

4. **Press [F6 (EXEC)] to insert the performance data.**

The inserted data will have the default parameter values, so edit them as necessary.

TIP

If you are not satisfied with the results of executing this operation, press [EXIT] to close the MICROSCOPE screen, and press [ERASE/UNDO] to return to the state prior to execution (Undo). After executing Undo, you can use Redo to revert to the previous state by performing the above procedure once again.

Erasing Sequencer Data (Erase)

If desired, you can erase just an individual event of sequencer data. You can also use the same operation to erase individual items of data from the tempo track or beat track.

* *It is not possible to erase the tempo change located at the beginning of the tempo track, the beat change located at the beginning of the beat track, or the pattern beat.*

1. **Access the MICROSCOPE screen for the track or pattern from which you want to erase data (p. 144).**

2. **Press ▲ ▼ to select the data that you want to erase.**

3. **Hold down [SHIFT] and press [F6 (ERASE)] to erase the sequencer data.**

* *You can also erase the sequencer data by pressing [ERASE/UNDO] in the MICROSCOPE screen.*

TIP

If you are not satisfied with the results of executing this operation, press [EXIT] to close the MICROSCOPE screen, and press [ERASE/UNDO] to return to the state prior to execution (Undo). After executing Undo, you can use Redo to revert to the previous state by performing the above procedure once again.

Moving Sequencer Data (Move)

You can move an individual item of sequencer data to a different location. Data recorded in the tempo track or beat track can also be moved in the same way.

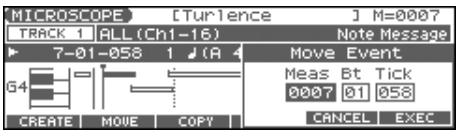
* *It is not possible to move the tempo change located at the beginning of the tempo track, the beat change and key signature located at the beginning of the beat track, or the pattern beat.*

1. **Access the MICROSCOPE screen for the track or pattern whose data you want to move (p. 144).**

2. **Press ▲ ▼ to select the data that you want to move.**

3. **Press [F2 (MOVE)].**

The Move Event window appears.



4. **Press ◀ ▶ to move the cursor to the "Meas (measure)," "Bt (beat)," and "Tick" fields.**

5. **Use the VALUE dial or [INC] [DEC] to specify the location to which the data will be moved.**

6. **Press [F6 (EXEC)] to move the data.**

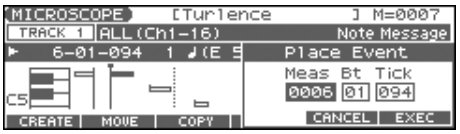
TIP

If you are not satisfied with the results of executing this operation, press [EXIT] to close the MICROSCOPE screen, and press [ERASE/UNDO] to return to the state prior to execution (Undo). After executing Undo, you can use Redo to revert to the previous state by performing the above procedure once again.

Copying Sequencer Data (Copy)

Sequencer data can be copied to the desired location. This is convenient when you want to use the same sequencer data at multiple locations. Data recorded in the tempo track or beat track can also be copied in this way.

1. **Access the MICROSCOPE screen for the track or pattern whose data you want to copy (p. 144).**
2. **Press ▲ ▼ to select the data that you want to copy.**
3. **Press [F3 (COPY)].**
4. **Press [F4 (PLACE)].**
   The Place Event window appears.



5. **Press ◀ ▶ to move the cursor to the "Meas (measure)," "Bt (beat)," and "Tick" fields.**
6. **Use the VALUE dial or [INC] [DEC] to specify the location to which the data will be copied.**
7. **Press [F6 (EXEC)] to paste the data.**

TIP

If you are not satisfied with the results of executing this operation, press [EXIT] to close the MICROSCOPE screen, and press [ERASE/UNDO] to return to the state prior to execution (Undo). After executing Undo, you can use Redo to revert to the previous state by performing the above procedure once again.

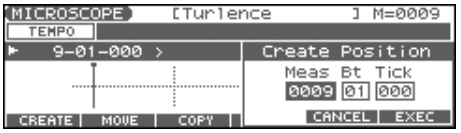
Changing the Tempo Midway Through the Song

If you want to change the tempo midway through the song, insert a new Tempo Change into the tempo track. The song will play back at that tempo following the location at which the tempo change was inserted.

* *If you want to create gradual tempo changes such as ritardando or accelerando, it is more convenient to use Tempo Recording (p. 125).*
* *If you want to make the entire song faster or slower, change the playback tempo in one of the PLAY screens.*

1. **From the MICROSCOPE screen, press [F5 (TRK/CH)].**
2. **Press ▲ to move the cursor to "Track."**
3. **Select "TEMPO" to "Track," and then press [F6 (CLOSE)].**
4. **Press [F1 (CREATE)].**
   The Create Event window appears.

5. **Press [F6 (EXEC)].**
   The Create Position window appears.



6. **Press ◀ ▶ to move the cursor to the "Meas (measure)," "Bt (beat)," and "Tick" fields.**
7. **Use the VALUE dial or [INC] [DEC] to specify the location at which the data will be inserted.**
8. **Press [F6 (EXEC)] to insert the tempo change data.**
9. **The inserted tempo change will have the default value, so change it as necessary.**

TIP

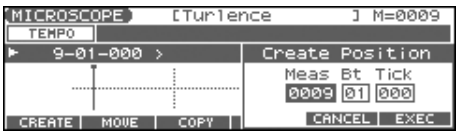
If you are not satisfied with the results of executing this operation, press [EXIT] to close the MICROSCOPE screen, and press [ERASE/UNDO] to return to the state prior to execution (Undo). After executing Undo, you can use Redo to revert to the previous state by performing the above procedure once again.

Changing the Time Signature Midway Through the Song

If you want to change the time signature midway through the song, insert a new Beat Change. The song will play back using that time signature for measures following the inserted beat change.

1. **From the MICROSCOPE screen, press [F5 (TRK/CH)].**
2. **Press ▲ to move the cursor to "Track."**
3. **Select "BEAT" to "Track," and then press [F6 (CLOSE)].**
4. **Press [F1 (CREATE)].**
   The Create Event window appears.

5. **Press [F6 (EXEC)].**
   The Create Position window appears.



6. **Use the VALUE dial or [INC] [DEC] to specify the location at which the data will be inserted.**
7. **Press [F6 (EXEC)] to insert the beat change data.**
8. **The inserted beat change will have the default values, so change them as necessary.**

TIP

If you are not satisfied with the results of executing this operation, press [EXIT] to close the MICROSCOPE screen, and press [ERASE/UNDO] to return to the state prior to execution (Undo). After executing Undo, you can use Redo to revert to the previous state by performing the above procedure once again.

NOTE

It is not possible to change the time signature in the middle of a measure. You must change the time signature at the beginning of a measure.

- If the time signature of the beat track differs from the pattern beat (p. 123) setting, the setting of the beat track will be used. For example, if a pattern with a 3/4 time signature is assigned in the middle of a 4/4 song, the pattern will not be aligned correctly with the other phrase tracks. To make this play back correctly, insert a 3/4 beat change into the beat track. To return the time signature to 4/4, insert a 4/4 beat change into the measure that follows the last measure of the pattern.

TIP

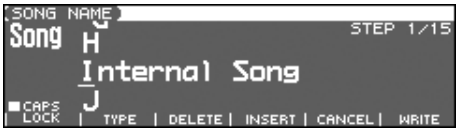
If you want to change the time signature from a measure that is later than the end of the song, or if it is ok to change the length of the song, you will find it more convenient to use the track edit Insert function (p. 138).

Assigning a Name to a Song (Song Name)

You can assign a song name to a song, or edit the song name. This song name is independent of the file name assigned when saving a song to user memory or memory card. Although you are not required to assign a song name, you can assign one using up to 15 characters, and you may find it a convenient way to store a title or memo that will help you organize your songs.

* *Some commercially available Standard MIDI Files contain copyright data. It is not possible to assign or modify the song name for such songs.*

1. **Access the SONG EDIT screen, and then load the song whose song name you want to assign (p. 131).**
2. **Press [F3 (UTILITY)].**
   The Song Utility Menu window appears.
3. **Press [F1 (SONG NAME)].**
   The SONG NAME screen appears.



4. **Assign a song name to the song. (up to 15 characters).**

cf.

For details on assigning names, refer to p. 28.

5. **After you have assigned a name, press [F6 (WRITE)].**

* *To cancel, press [F5 (CANCEL)].*

Patch/

ıs/reverb will use the
pads

ɔlled by D Beam
ɹen and the Arpeggio on/off

Group screen and the Rhythm

ɹrd Memory screen and the Chord
ıng
hether the bender, modulation, D Beam, and
ɜed with the keyboard or with the pads

a Song with Samples Song+Smpls)

ow to save the Temporary Song along with all samples in
e memory and the current sound generator settings.

From the SAVE/LOAD MENU screen, press [F1].
The SONG FILE NAME screen appears.

2. Assign a file name to the song (up to 8 characters). A file name extension of ".SVQ" will automatically be added to the song.

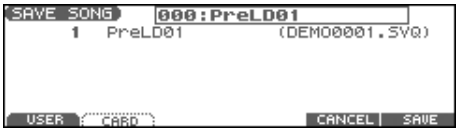
cf.

For details on assigning names, refer to p. 28.

NOTE

Song file names may not contain lowercase characters or certain symbols (" * + , . / : ; < = > ? [\ ] |).

3. After you have assigned a name, press [F6 (WRITE)].
The SAVE SONG screen appears.



4. Press [F1 (USER)] (User memory) or [F2 (CARD)] (Memory card) to select the location where you want to save the song.

5. Press [F6 (SAVE)].
A message will ask you for confirmation.

6. Press [F6 (EXEC)] to execute.

* *To cancel, press [F5 (CANCEL)].*

Samples
✔
–
✔

ʌith a song

ʌ setup you are using at that
ɹuencer data.
ʌed along with the song are special
ɜ; they are separate from the user
ɜs.

ɹerformances or patches in a different song, or song, you'll need to save them in the user area.

ɹttings are not included in the data saved with a completely reproduce the way in which the song the time it was saved, you will also need to check the ɹttings.

When samples are saved, they will automatically be overwritten onto the same numbers of the same bank in the sample list. The samples will be saved with a file name of "smpl****.wav (aif)" in the "ROLAND/SMPL" folder of user memory or memory card. The number of the file name will correspond to the number in the sample list.

File Name and Song Name

MRC Pro songs and Standard MIDI Files have a song name in addition to a file name. The file name is used to distinguish between files, and must be assigned when you save a file. It will help you manage songs if you use the file name to distinguish between types of song, and use the song name to assign a title. Use the SONG NAME screen to assign a song name (p. 149).

If you assign a file name that is identical to a file name already existing in the user area or memory card, and attempt to save, a message of "File "****" Already Exists! Overwrite Sure?" will appear, asking you for confirmation. If it is OK to overwrite the existing file, press [F6 (EXEC)]. If you decide to cancel the Save operation, press [F5 (CANCEL)].

If you attempt to save data on a memory that was not formatted by the Fantom-Xa, a message of "Unformatted!" (memory card has not been formatted) will appear. Please format the memory card on the Fantom-Xa (p. 205).

Saving a Song (Save Song)

Here's how to save the Temporary Song with the current sound generator settings.

1. From the SAVE/LOAD MENU screen, press [F2].

The SONG FILE NAME screen appears.

2. Assign a file name to the song (up to 8 characters). A file name extension of ".SVQ" will automatically be added to the song.

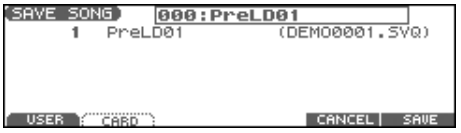
cf.
For details on assigning names, refer to p. 28.

NOTE

Song file names may not contain lowercase characters or certain symbols (" * + , . / : ; < = > ? [\ ] |).

3. After you have assigned a name, press [F6 (WRITE)].

The SAVE SONG screen appears.



4. Press [F1 (USER)] (User memory) or [F2 (CARD)] (Memory card) to select the location where you want to save the song.

5. Press [F6 (SAVE)].

A message will ask you for confirmation.

6. Press [F6 (EXEC)] to execute.

* *To cancel, press [F5 (CANCEL)].*

Even if you save your song using "Save," it cannot be played back by a sequencer other than the Fantom-Xa's own sequencer. If you want to play back your song on a sequencer other than the Fantom-Xa's sequencer, you must save the song as an SMF file. Also at this time, you must record the appropriate bank selects and program numbers so that the correct sounds will be played.

The performance settings will be saved in the state they were in when you executed Save. This means that if the performance changed during the song, and you saved the song in that state when you finished recording, the state in which recording began will not be saved. In other words when you play back the song from the beginning, it will begin with the performance sounds that were being used at the point where you saved. If you change the performance during the song, you must use the Microscope screen etc. to insert the appropriate bank select and program number at the beginning of the song to specify the performance with which you began recording it (p. 144).

Saving Samples (Save all Samples)

Here's how to save all samples from sample memory into user memory or a memory card.

1. From the SAVE/LOAD MENU screen, press [F3].

A message will ask you for confirmation.

2. Press [F6 (EXEC)] to execute.

* *To cancel, press [F5 (CANCEL)].*

When samples are saved, they will automatically be overwritten onto the same number of the same bank in the sample list.

Saving a Song as an SMF File (Save as SMF)

Here's how to convert and save an Temporary Song as an SMF file.

1. From the SONG EDIT screen, press [F3 (UTILITY)].

2. Press [F5 (SAVE AS SMF)].
The SAVE AS SMF screen appears.

3. Assign a file name to the song.

cf.

For details on assigning names, refer to p. 28.

NOTE

Song file names may not contain lowercase characters or certain symbols (" * + , . / : ; < = > ? [\ ] |).

4. After you have assigned a name, press [F6 (WRITE)].

5. Press either [F1 (USER)] (user memory) or [F2 (CARD)] (memory card) to select the save-destination.

6. Press either [F3 (FMT 0)] or [F4 (FMT 1)] to select the format for saving.

- **FMT 0 (Format 0):**
  Convert the song to a Format 0 Standard MIDI File (all performance data is saved in one phrase track) and save it to disk. An extension of ".MID" will be added automatically.
- **FMT 1 (Format 1):**
  Convert the song to a Format 1 Standard MIDI File (performance data is saved in more than one phrase track) and save it to disk. An extension of ".MID" will be added automatically.

7. Press [F6 (SAVE)].
A message will ask for confirmation.

8. Press [F6 (EXEC)] to execute.
The filename extension will be ".MID" whether you select "Save SMF (Format 0)" or "Save SMF (Format 1)." The two cannot be distinguished in this way.

* *To cancel, press [F5 (CANCEL)].*

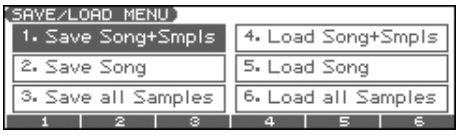
When you save data in SMF format, the sound setup data will not be saved. In order to ensure that the correct sounds are played, you must record the appropriate bank select and program numbers (p. 144).

If you assign a file name that is identical to one already existing in the user area or the memory card, a message of "File "****" Already Exists! Over Write OK?" will ask you for confirmation when you attempt to save the file. If it is OK to overwrite the existing file, press [F6 (EXEC)]. If you decide not to save the file, press [F5 (CANCEL)].
If you attempt to save data to a memory card that was not formatted on the Fantom-Xa, a message of "Unformatted!" (the memory card has not been formatted) will appear. Please format the memory card on the Fantom-Xa (p. 205).

Loading a Song (Load)

Basic Procedure

1. Hold down [SHIFT] and press [WRITE].
The SAVE/LOAD MENU screen appears.



2. Press [F4]–[F6] to select the format in which you want to load the song.

- **Load Song+Smpls:**
  Loads a song into Temporary Area. All samples will be loaded into sample memory.
- **Load Song:**
  Loads a song into Temporary Area.
- **Load all Samples:**
  Loads all samples into sample memory.

Function	Button	Song	ALL Samples
Load Song+Smpls	[F4]	✔	✔
Load Song	[F5]	✔	–
Load all Samples	[F6]	–	✔

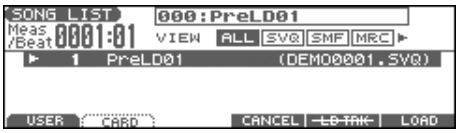
✔: Loading is possible

* *A song saved on the Fantom-Xa (.SVQ) also includes the data for the sound generator's temporary area.*

Loading a Song with Samples (Load Song+Smpls)

Here's how you can load a song into Temporary Area and all samples into sample memory.

1. From the SAVE/LOAD MENU screen, press [F4].
The SONG LIST screen appears.



* *By pressing ◀ or ▶ in the above screen, you can specify the type of songs that will be displayed. If various types of songs are saved together, it will be easier to find the desired song if you restrict the displayed file types in this way.*

ALL: all songs will be displayed
SVQ: only SVQ files will be displayed
SMF: only Standard MIDI Files will be displayed
MRC: only MRC files will be displayed

2. Press either [F1 (USER)] or [F2 (CARD)] to select the load-destination, and use ▲ ▼ to select a song.

3. Press [F6 (LOAD)].
A message will ask you for confirmation.

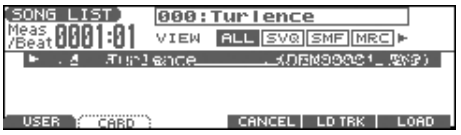
4. Press [F6 (EXEC)] to execute.

* *To cancel, press [F5 (CANCEL)].*

Loading a song (Load Song)

Here's how you can load a song into Temporary Area.

1. From the SAVE/LOAD MENU screen, press [F5].
The SONG LIST screen appears.



* *By pressing ◀ or ▶ in the above screen, you can specify the type of songs that will be displayed. If various types of songs are saved together, it will be easier to find the desired song if you restrict the displayed file types in this way.*

ALL: all songs will be displayed
SVQ: only SVQ files will be displayed
SMF: only Standard MIDI Files will be displayed
MRC: only MRC files will be displayed

2. Press either [F1 (USER)] or [F2 (CARD)] to select the load-destination, and use ▲ ▼ to select a song.

3. Press [F6 (LOAD)].
A message will ask you for confirmation.

4. Press [F6 (EXEC)] to execute.

* *To cancel, press [F5 (CANCEL)].*

Loading Samples (Load all Samples)

Here's how you can load all samples from user memory or memory card into sample memory.

1. From the SAVE/LOAD MENU screen, press [F6].
A message will ask you for confirmation.

2. Press [F6 (EXEC)] to execute.

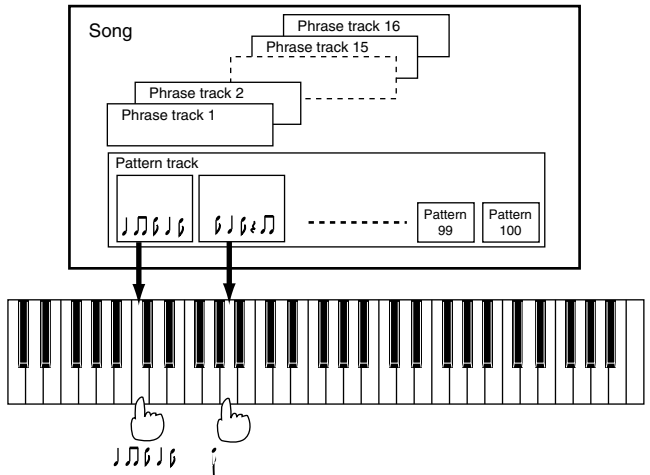
* *To cancel, press [F5 (CANCEL)].*

Playing a Phrase at the Touch of a Finger (RPS)

The **RPS (Realtime Phrase Sequence)** function lets you assign patterns to the keyboard or Pad, and play a pattern by pressing a single note.

For example, a complex phrase that would be difficult to play live can be assigned to a note of the keyboard, and played with one finger at the appropriate moment.

Since up to eight patterns can be playing at once, you can create patterns for separate instruments such as drums, bass, and keyboard, and combine them to create a new song. This performance can also be recorded, allowing you to use it in a way similar to phrase sampling.



Before you use the RPS function, you must record the desired phrase in a pattern. For details on recording, refer to **Recording Your Performance as You Play It (Realtime Recording)** (p. 124) or **Inputting Data One Step at a Time (Step Recording)** (p. 128).

NOTE

Only note messages should be recorded in a pattern. If a large amount of MIDI data is recorded in a pattern, using RPS to play back the pattern can cause notes to be delayed. MIDI messages other than note messages should be recorded in a phrase track.

You can assign a pattern to each note of the keyboard, and specify how the pattern will be played. These settings are made independently for each song, and will be saved when you save the song in MRC Pro song format.

In order to make RPS settings, you must first load a song into Temporary Area.

1. **Holding down [SHIFT] and press [RPS].**
   The RPS Setup screen appears.

   In this screen you can set various parameters related to the RPS function.

2. **Press [F1 (COMMON)]–[F3 (PAD)] and/or to select the parameter.**

3. **Use the VALUE dial or [INC] [DEC] to make the setting.**

4. **When you are finished making settings, press [EXIT] to return to the previous screen.**

Parameter	Value	Explanation
[F1 (COMMON)]		
Trigger Quantize	REAL, BEAT, MEASURE	Specifies how pattern playback is to begin when a key is pressed during song playback or recording. **REAL:** The pattern will begin playing at the moment you press the key. **BEAT:** If the song is being played or recorded, the pattern will begin playing at the beginning of the next beat if you press the key in the middle of the beat. **MEASURE:** If the song is being played or recorded, the pattern will begin playing at the beginning of the next measure if you press the key in the middle of the measure.
Velocity Sens	OFF, LOW, MID, HIGH	Turn this "OFF" if you want the pattern to play back at the volume at which it was recorded. If you want to vary the pattern playback volume according to the strength with which you pressed the key, select either "LOW," "MID," or "HIGH."
[F2 (KEY)] [F3 (PAD)]		
KBD Note	16 (E0)–127 (G9)	Key to which the pattern will be assigned You can also specify this by pressing a key on the keyboard.
PAD Number	PAD 1–PAD 9	Pad number to which the pattern is to be assigned You can also specify a pad directly by pressing it.
Pattern	STOP, OFF, PTN001–PTN100	**STOP:** The key/pad will be a Stop Trigger key/pad that stops the currently playing patterns. **OFF:** Select this for keys/pads to which you do not want to assign a pattern. **PTN001–PTN100:** Pattern number that will be assigned to the key/pad The name of the selected pattern will be displayed at the right of the pattern number.
Playback Mode	LOOP1, LOOP2, ONCE	Specify how the pattern will be played. **LOOP1:** The pattern will play back repeatedly as long as the key is held down. **LOOP2:** The pattern will play back repeatedly. To stop playback, press a Stop Trigger key or press the same key once again. **ONCE:** The pattern will play back once.
Mute Group	OFF, 1–31	This function lets you prevent patterns of the same group from sounding together. For example, a fill-in and bridge should never be played at the same time, and to ensure that this does not occur, you can set the fill-in and bridge to the same mute group number. Thirty-one mute groups can be specified. Select "OFF" if you do not want to use a mute group for a pattern.

* *Pattern parameter, Playback Mode parameter, and Mute Group parameter are set for each key. Although the Fantom-Xa has a 61-note keyboard, you can also make settings for all keys in the range of A-1 to G9. Settings for the Trigger Quantize parameter and Velocity Sens parameter are for the entire song.*

Using the RPS Function While You Perform

Normally, when playing patterns individually, the song containing the patterns must be loaded into Temporary Area. However, when using the RPS function to play back patterns, you can use Quick Play.

1. **Make sure that the preparations for using the RPS function have been made correctly.**
2. **Access the PLAY screen for the mode in which you want to perform.**
3. **Press [RPS] so the button is lit.**
   The RPS function will be turned on, and you will be able to perform using RPS.

   MEMO

   If you save the song in MRC Pro song format when the RPS function is turned on, this state will also be saved. This means that you will always be able to perform using RPS simply by selecting that song.
4. **Press SEQUENCER [PLAY] to play back the song.**
5. **Press a key or pad to which a pattern is assigned, making the pattern play.**
   If you want to stop playback midway through the pattern, press the Stop Trigger key. Alternatively if the Playback Mode parameter is set to "LOOP2," you can stop the pattern playback by pressing the same key once again.

* *Up to eight patterns can play back simultaneously.*

TIP

You must play back the song if you want patterns to play back in synchronization with the song, or if you want multiple patterns to play in synchronization.

- If the song is not playing, the pattern will begin playing the instant you press the key, regardless of the Trigger Quantize parameter setting.
- The pattern will be played back according to the time signature of the song (beat track). This means that if the phrase track contains no sequencer data, the song will not play, and it will not be possible to play back patterns in synchronization. In such cases, you can insert several blank measures into a phrase track, and play them as a loop.

Recording a Performance Using the RPS Function

A performance that uses the RPS function can be recorded in real time in the same way as a conventional performance. This provides an easy way to remix patterns and create a song.

MEMO

If you use the RPS function during realtime recording, the pattern performance will be recorded just as it occurs.

1. **Make sure that preparations for the RPS function have been made correctly.**
2. **Access the PLAY screen for the mode in which you want to perform.**
3. **Press [RPS] to turn on the RPS function.**
4. **Press SEQUENCER [REC].**
   The [REC] indicator blinks, and the Realtime Rec Standby window appears. In this window you can make various settings for realtime recording.

5. **Specify how recording is to take place.**

   cf.

   For details on these settings, refer to **Recording Your Performance as You Play It (Realtime Recording)** (p. 124).
6. **Press SEQUENCER [PLAY].**
   The Recording Standby window will close, the [REC] indicator will change from blinking to lit, and recording will begin.
7. **Press a key or pad to which a pattern is assigned.**
   The assigned patterns will be played back according to the keys or pads you press, and their performances will be recorded.

* *If the Count In parameter is set to "WAIT NOTE" in the Recording Standby window, recording will not begin even if you press a key that is assigned to a pattern, or a key that is assigned as a Stop Trigger key.*

8. **When you are finished recording, press SEQUENCER [STOP].**
   The [REC] indicator will go dark.

Adding Effects

This section explains the procedures and settings for applying effects in each mode.

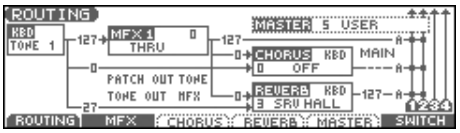
For details of the Fantom-Xa's onboard effects, refer to **About the Onboard Effects** (p. 22).

Turning Effects On and Off

The Fantom-Xa's onboard effects can be turned on/off as a whole. Turn these settings OFF when you wish to listen to the unprocessed sound as you create a sound, or when you wish to use external effects processors instead of the built-in effects.

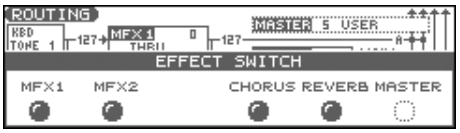
* *Effect ON/OFF settings are global Fantom-Xa settings. These settings cannot be made for each Patch or Performance individually.*

1. Press [EFFECTS] to access the ROUTING screen.



2. Press [F6 (SWITCH)].

The EFFECT SWITCH window appears.



3. Press [F1 (MFX1)]–[F6 (MASTER)] to turn each effect switch on/off.

The switch will turn on/off each time you press the button.

4. Press [EXIT] to return to the previous screen.

When you return to the PLAY screen, the settings will be displayed in the following area.

Making Effect Settings

1. In the appropriate mode, select the sound to which you want to apply effects.

2. Press [EFFECTS] to access the ROUTING screen.

3. Press [F1 (ROUTING)]–[F5 (MASTER)] to select the effect that you want to edit.

4. Use [CURSOR] to move the cursor to the parameter you wish to change.

5. Use the VALUE dial or [INC] [DEC] to get the value you want.

6. Press [EXIT] to return to the previous screen.

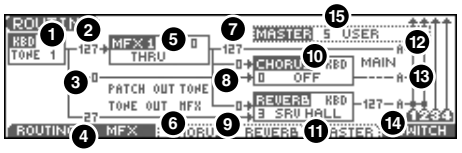
* *You cannot edit the effect settings for patches of the GM group.*

Applying Effects in Patch Mode

In Patch mode you can use two multi-effects (MFX1, MFX2), one chorus, and one reverb. Multi-effect 1 (MFX1) will operate according to the effect settings of the patch or rhythm set assigned to the Keyboard part. Multi-effect 2 (MFX2) will operate according to the effect settings of the patch or rhythm set assigned to the Pad part. Chorus and reverb will both operate according to the settings of the patch or rhythm set assigned to either the Keyboard part or the Pad part.

Specifying How the Sound Will Be Output (Routing)

Here you can make overall settings for effects, and the output destination and level of each signal.



cf.

For details on these settings, refer to **Making Effect Settings** (p. 157).

	Parameter	Value	Explanation
❶	Part Select	KBD, PAD	Part for which you want to make settings
	Tone Select (Rhythm Key Select)	1–4 (A0–C8)	Tone (or rhythm tone) for which you want to make settings This parameter is Rhythm Key Select when a rhythm set is being selected. You can select the rhythm tone (A0–C8) for which you want to make settings.
❷	Tone Output Level	0–127	Level of the signal sent to the output destination specified by Output Assign
❸	Tone Chorus Send Level	0–127	Level of the signal sent to chorus for each tone
❹	Tone Reverb Send Level	0–127	Level of the signal sent to reverb for each tone
❺	MFX Type	0–78	Selects from among the 78 available multi-effects. For details on multi-effects parameters, refer to **Multi-Effects Parameters** (p. 164).
❻	Patch Output Assign	MFX, A, B, 1–4, TONE	Specifies how the direct sound of each patch will be output. **MFX:** Output in stereo through multi-effects. You can also apply chorus or reverb to the sound that passes through multi-effects. **A, B:** Output to the OUTPUT A (MIX) jack or OUTPUT B jack in stereo without passing through multi-effects. **1–4:** Output to the INDIVIDUAL 1–4 jacks in mono without passing through multi-effects. **TONE:** Outputs according to the settings for each tone. This parameter is Rhythm Output Assign when a rhythm set is being selected. You can specifies for each rhythm set how the direct sound will be output. * *If the Mix/Parallel parameter is set to "MIX," all sounds are output from the OUTPUT A (MIX) jacks in stereo (p. 194).*
	Tone Output Assign	MFX, A, B, 1–4	Specifies how the direct sound of each tone will be output. **MFX:** Output in stereo through multi-effects. You can also apply chorus or reverb to the sound that passes through multi-effects. **A, B:** Output to the OUTPUT A (MIX) jack or OUTPUT B jack in stereo without passing through multi-effects. **1–4:** Output to the INDIVIDUAL 1–4 jacks in mono without passing through multi-effects. * *If the Patch Output Assign is set to anything other than "TONE," these settings will be ignored.* • When the Structure Type parameter has a setting of Type "2"–"10," the outputs of tones 1 and 2 will be combined with tone 2, and the outputs of tones 3 and 4 will be combined with tone 4. For this reason, tone 1 will follow the settings of tone 2, and tone 3 will follow the settings of tone 4 (p. 38). * *If the Mix/Parallel parameter is set to "MIX," all sounds are output from the OUTPUT A (MIX) jacks in stereo (p. 194).*
❼	MFX Output Level	0–127	Volume of the sound passed through the multi-effects
❽	MFX Chorus Send Level	0–127	Amount of chorus for the sound passed through multi-effects

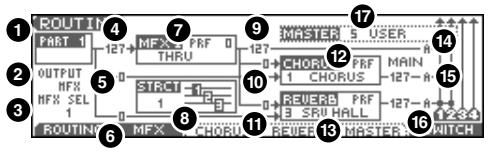
	Parameter	Value	Explanation
❾	MFX Reverb Send Level	0–127	Amount of reverb for the sound passed through multi-effects
❿	Chorus Source	KBD, PAD	Chorus parameter settings **KBD:** Settings of the patch or rhythm set assigned to the Keyboard part **PAD:** Settings of the patch or rhythm set assigned to the Pad part
	Chorus Type	0–3	Selects either chorus or delay. **0 (OFF):** Neither chorus or delay is used. **1 (CHORUS):** Chorus is used. **2 (DELAY):** Delay is used. **3 (GM2 CHO):** General MIDI 2 chorus
⓫	Reverb Source	KBD, PAD	Reverb parameter settings **KBD:** Settings of the patch or rhythm set assigned to the Keyboard part **PAD:** Settings of the patch or rhythm set assigned to the Pad part
	Reverb Type	0–5	Type of reverb **0 (OFF):** Reverb is not used. **1 (REVERB):** Normal reverb **2 (SRV ROOM):** Simulates typical room acoustic reflections. **3 (SRV HALL):** Simulates typical concert hall acoustic reflections. **4 (SRV PLATE):** Simulates a plate reverb, a popular type of artificial reverb unit that derives its sound from the vibration of a metallic plate. **5 (GM2 REV):** General MIDI 2 reverb
⓬	MFX Output Assign	A, B	Output destination of the sound passed through the multi-effects **A:** OUTPUT A (MIX) jacks in stereo **B:** OUTPUT B jacks in stereo * *If the Mix/Parallel parameter is set to "MIX," all sounds are output from the OUTPUT A (MIX) jacks in stereo (p. 194).*
⓭	Chorus Output Select	MAIN, REV, M+R	Specifies how the sound routed through chorus will be output. **MAIN:** Output to the OUTPUT jacks in stereo. **REV:** Output to reverb in mono. **M+R:** Output to the OUTPUT jacks in stereo, and to reverb in mono.
	Chorus Level	0–127	Volume of the sound passed through chorus
	Chorus Output Assign	A, B	Selects the pair of OUTPUT jacks to which the chorus sound is routed when Chorus Output Select is set to "MAIN" or "M+R." **A:** Output to the OUTPUT A (MIX) jacks in stereo. **B:** Output to the OUTPUT B jacks in stereo. * *When Chorus Output Select is set to "REV," this setting will have no effect.*
⓮	Reverb Level	0–127	Volume of the sound passed through reverb
	Reverb Output Assign	A, B	Specifies how the sound routed through reverb will be output. **A:** Output to the OUTPUT A (MIX) jacks in stereo. **B:** Output to the OUTPUT B jacks in stereo. * *If the Mix/Parallel parameter is set to "MIX," all sounds are output from the OUTPUT A (MIX) jacks in stereo (p. 194).*
⓯	Mastering Effect Type	0–5	Mastering effect settings

Applying Effects in Performance Mode

In Performance mode you can use three multi-effects (MFX1, MFX2, MFX3), one chorus, and one reverb. For each of the three multi-effects, the chorus, and the reverb, you can specify whether it will operate according to the effect settings of the performance, or according to the effect settings of the patch or rhythm set assigned to the part you specify. The three multi-effects can be used independently, or you can connect two or three of them in series.

Specifying How the Sound Will Be Output (Routing)

Here you can make overall settings for effects, and the output destination and level of each signal.



cf.

For details on these settings, refer to **Making Effect Settings** (p. 157).

* *For the following parameters* ❼ , ❾ – ⓫ , *and* ⓮ *settings can be made individually for three systems multi-effects (MFX1–MFX3).*

Parameter		Value	Explanation
❶	Part Select	1–16	Part for which you want to make settings
❷	Part Output Assign	MFX, A, B, 1–4, PAT	Specifies for each part how the direct sound will be output. **MFX:** Output in stereo through multi-effects. You can also apply chorus or reverb to the sound that passes through multi-effects. **A, B:** OUTPUT A (MIX) jack or OUTPUT B jack in stereo without passing through multi-effects **1–4:** INDIVIDUAL 1–4 jacks in mono without passing through multi-effects **PAT:** Determined by the settings of the patch or rhythm set assigned to the part. * *If the Mix/Parallel parameter is set to "MIX," all sounds are output from the OUTPUT A (MIX) jacks in stereo (p. 194).*
❸	Part Output MFX Select	1–3 (MFX1–MFX3)	Specifies which multi-effects will be used.
❹	Part Output Level	0–127	Level of the signal sent to the output destination specified by Part Output Assign (❷)
❺	Part Chorus Send Level	0–127	Level of the signal sent to chorus for each part
❻	Part Reverb Send Level	0–127	Level of the signal sent to reverb for each part.
❼	MFX Source	PRF, P1–P16	Multi-effects parameter settings used by the performance **PRF:** Performance settings **P1–P16:** Settings of the patch/rhythm set assigned to one of the parts (Select the part number.)
	MFX Type	0–78	Selects from among the 78 available multi-effects. For details on multi-effects parameters, refer to **Multi-Effects Parameters** (p. 164).
❽	MFX Structure	1–16	Specifies how MFX1–3 will be connected.
❾	MFX Output Level	0–127	Volume of the sound passed through the multi-effects
❿	MFX Chorus Send Level	0–127	Amount of chorus for the sound passed through multi-effects
⓫	MFX Reverb Send Level	0–127	Amount of reverb for the sound passed through multi-effects

Parameter		Value	Explanation
⓬	Chorus Source	PRF, P1–P16	Chorus parameter settings used by the performance **PRF:** Performance settings **P1–P16:** Settings of the patch/rhythm set assigned to one of the parts (Select the part number.)
	Chorus Type	0–3	Selects either chorus or delay. **0 (OFF):** Neither chorus or delay is used. **1 (CHORUS):** Chorus is used. **2 (DELAY):** Delay is used. **3 (GM2 CHO):** General MIDI 2 chorus
⓭	Reverb Source	PRF, P1–P16	Reverb parameter settings used by the performance **PRF:** Performance settings **P1–P16:** Settings of the patch/rhythm set assigned to one of the parts (Select the part number.)
	Reverb Type	0–5	Type of reverb **0 (OFF):** Reverb is not used. **1 (REVERB):** Normal reverb **2 (SRV ROOM):** Simulates typical room acoustic reflections. **3 (SRV HALL):** Simulates typical concert hall acoustic reflections. **4 (SRV PLATE):** Simulates a plate reverb, a popular type of artificial reverb unit that derives its sound from the vibration of a metallic plate. **5 (GM2 REV):** General MIDI 2 reverb
⓮	MFX Output Assign	A, B	Output destination of the sound passed through the multi-effects **A:** OUTPUT A (MIX) jacks in stereo **B:** OUTPUT B jacks in stereo * *If the Mix/Parallel parameter is set to "MIX," all sounds are output from the OUTPUT A (MIX) jacks in stereo (p. 194).* * *For some settings of MFX Structure, the sound that passes through the multi-effect will be sent to a different multi-effect, and the MFX Output Assign setting will be ignored.*
⓯	Chorus Output Select	MAIN, REV, M+R	Specifies how the sound routed through chorus will be output. **MAIN:** Output to the OUTPUT jacks in stereo. **REV:** Output to reverb in mono. **M+R:** Output to the OUTPUT jacks in stereo, and to reverb in mono.
	Chorus Level	0–127	Volume of the sound passed through chorus
	Chorus Output Assign	A, B	Selects the pair of OUTPUT jacks to which the chorus sound is routed when Chorus Output Select is set to "MAIN" or "M+R." **A:** OUTPUT A (MIX) jacks in stereo **B:** OUTPUT B jacks in stereo * *When Chorus Output Select is set to "REV," this setting will have no effect.* * *If the Mix/Parallel parameter is set to "MIX," all sounds are output from the OUTPUT A (MIX) jacks in stereo (p. 194).*
⓰	Reverb Level	0–127	Volume of the sound passed through reverb
	Reverb Output Assign	A, B	Specifies how the sound routed through reverb will be output. **A:** Output to the OUTPUT A (MIX) jacks in stereo. **B:** Output to the OUTPUT B jacks in stereo.
⓱	Mastering Effect Type	0–5	Mastering effect settings

When Patch or Rhythm Set Settings Are Selected

When the patch or rhythm set's effects settings are selected, those settings are shown in each of the performance's effects setting screens, and the settings can be then be changed as well. Changes to patch or rhythm set effects parameter settings are lost when another patch or rhythm set is selected. To keep the modified settings, save the patch/rhythm set settings (p. 37, p. 57).

Making Multi-Effects Settings (MFX1–3)

Here we will explain how to make multi-effects settings in Performance mode.

cf.

For details on these settings, refer to **Making Effect Settings** (p. 157).

Parameter	Value	Explanation
(Multi-Effects Type)	00–78	Selects from among the 78 available multi-effects.

* *In this setting screen, you can edit the parameters of the multi-effects that is selected by the Multi-effects Type setting. For details on the parameters that can be edited, refer to* ***Multi-Effects Parameters*** *(p. 164).*

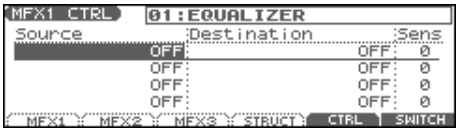
MEMO

Parameters marked by ▯ can be selected as a multi-effect control destination parameter (see below).

MEMO

In Patch mode, the Keyboard part can use MFX1 and the Pad part can use MFX2.

Making Multi-Effects Settings (MFX Control)



cf.

For details on these settings, refer to **Making Effect Settings** (p. 157).

* *Press [F5 (CTRL)] to switch the multi-effects that will be modified.*

Parameter	Value	Explanation
Source 1–4	OFF, CC01–31, 33–95, PITCH BEND, AFTERTOUCH, SYS CTRL1–4	MIDI message used to change the multi-effects parameter with the multi-effects control **OFF:** Multi-effects control will not be used. **CC01–31, 33–95:** Controller numbers 1–31, 33–95 **PITCH BEND:** Pitch Bend **AFTERTOUCH:** Aftertouch **SYS CTRL1–4:** MIDI messages used as common multi-effects controls If you want to use common controllers for the entire Fantom-Xa, select "SYS CTRL1"–"SYS CTRL4." MIDI messages used as System Control 1–4 are set with the Sys Ctrl 1–4 Source parameters (p. 196).
Destination 1–4	Refer to p. 164.	Multi-effects parameters to be controlled with the multi-effects control The multi-effects parameters available for control will depend on the multi-effects type. For details, refer to **Multi-Effects Parameters** (p. 164).
Sens 1–4	-63– +63	Amount of the multi-effects control's effect that is applied To make an increase in the currently selected value (to get higher values, move to the right, increase rates, and so on), select a positive value; to make a decrease in the currently selected value (to get lower values, move to the left, decrease rates, and so on), select a negative value. For either positive or negative settings, greater absolute values will allow greater amounts of change. Set this to "0" if you don't want to apply the effect.

* *In patch/rhythm set mode, there are parameters that determine, for each tone/rhythm tone, whether or not Pitch Bend, Controller Number 11 (Expression) and Controller Number 64 (Hold 1) are received (p. 51). When these settings are "ON," and the MIDI messages are received, then when any change is made in the settings of the desired parameter, the Pitch Bend, Expression, and Hold1 settings also change simultaneously. If you want to change the targeted parameters only, then set these to "OFF."*

- There are parameters that determine whether or not specific MIDI messages are received for each MIDI channel (p. 51). When using the

multi-effects control, confirm that any MIDI messages used for the multi-effects control will be received. If the Fantom-Xa is set up such that reception of MIDI messages is disabled, then the multi-effects control will not function.

Multi-Effects Control

If you wanted to change the volume of multi-effects sounds, the delay time of Delay, and the like, using an external MIDI device, you would need to send System Exclusive messages-MIDI messages designed exclusively for the Fantom-Xa. However, System Exclusive messages tend to be complicated, and the amount of data that needs to be transmitted can get quite large.

For that reason, a number of the more typical of the Fantom-Xa's multi-effects parameters have been designed so they accept the use of Control Change (or other) MIDI messages for the purpose of making changes in their values. For example, you can use the Pitch Bend lever to change the amount of distortion, or use the keyboard's touch to change the delay time of Delay. The parameters that can be changed are predetermined for each type of multi-effect; among the parameters described in **Multi-Effects Parameters** (p. 164), these are indicated by a "#."

In the multi-effect setting screen, a "c" symbol will be shown at the left of the parameter.

The function that allows you use MIDI messages to make these changes in realtime to the multi-effects parameters is called the **Multi-effects Control**. Up to four multi-effects controls can be used in a single patch/rhythm set/performance.

When the multi-effects control is used, you can select the amount of control (Sens parameter) applied, the parameter selected (Destination parameter), and the MIDI message used (Source parameter).

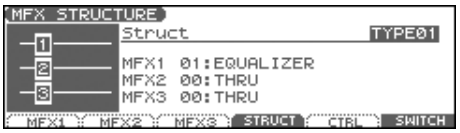
TIP

By using the Matrix Control instead of the Multi-effects Control, you can also change the some popular parameters of multi-effects in realtime (p. 49).

Specifying the Multi-Effects Structure (MFX Structure)

Here's how to specify how MFX 1–3 will be connected.

* *This parameter is not found in Patch mode.*



cf.

For details on these settings, refer to **Making Effect Settings** (p. 157).

Parameter	Value	Explanation
Struct	TYPE01–TYPE16	Specifies how MFX1–3 will be connected.
(MFX1–3 Type)	00 (THRU)–78	Selects the multi-effect type of MFX1–3.

Multi-Effects Parameters

The multi-effects feature 78 different kinds of effects. Some of the effects consist of two or more different effects connected in series.

Parameters marked with a sharp "#" can be controlled using a specified controller (Two setting items will change simultaneously for "#1" and "#2").

FILTER (10 types)		
01	EQUALIZER	P.165
02	SPECTRUM	P.165
03	ISOLATOR	P.165
04	LOW BOOST	P.165
05	SUPER FILTER	P.166
06	STEP FILTER	P.166
07	ENHANCER	P.166
08	AUTO WAH	P.167
09	HUMANIZER	P.167
10	SPEAKER SIMULATOR	P.167
MODULATION (12 types)		
11	PHASER	P.168
12	STEP PHASER	P.168
13	MULTI STAGE PHASER	P.168
14	INFINITE PHASER	P.168
15	RING MODULATOR	P.169
16	STEP RING MODULATOR	P.169
17	TREMOLO	P.169
18	AUTO PAN	P.169
19	STEP PAN	P.170
20	SLICER	P.170
21	ROTARY	P.170
22	VK ROTARY	P.171
CHORUS (12 types)		
23	CHORUS	P.171
24	FLANGER	P.171
25	STEP FLANGER	P.172
26	HEXA-CHORUS	P.172
27	TREMOLO CHORUS	P.172
28	SPACE-D	P.172
29	3D CHORUS	P.173
30	3D FLANGER	P.173
31	3D STEP FLANGER	P.173
32	2BAND CHORUS	P.174
33	2BAND FLANGER	P.174
34	2BAND STEP FLANGER	P.175
DYNAMICS (8 types)		
35	OVERDRIVE	P.175
36	DISTORTION	P.175
37	VS OVERDRIVE	P.175
38	VS DISTORTION	P.175
39	GUITAR AMP SIMULATOR	P.176
40	COMPRESSOR	P.176
41	LIMITER	P.176
42	GATE	P.177
DELAY (13 types)		
43	DELAY	P.177
44	LONG DELAY	P.177
45	SERIAL DELAY	P.178
46	MODULATION DELAY	P.178
47	3TAP PAN DELAY	P.178
48	4TAP PAN DELAY	P.179
49	MULTI TAP DELAY	P.179
50	REVERSE DELAY	P.179
51	SHUFFLE DELAY	P.180
52	3D DELAY	P.180
53	TIME CTRL DELAY	P.180
54	LONG TIME CTRL DELAY	P.181
55	TAPE ECHO	P.181
LO-FI (5 types)		
56	LOFI NOISE	P.181
57	LOFI COMPRESS	P.182
58	LOFI RADIO	P.182
59	TELEPHONE	P.182
60	PHONOGRAPH	P.182
PITCH (3 types)		
61	PITCH SHIFTER	P.183
62	2VOICE PITCH SHIFTER	P.183
63	STEP PITCH SHIFTER	P.183
REVERB (2 types)		
64	REVERB	P.184
65	GATED REVERB	P.184
COMBINATION (12 types)		
66	OVERDRIVE → CHORUS	P.184
67	OVERDRIVE → FLANGER	P.184
68	OVERDRIVE → DELAY	P.185
69	DISTORTION → CHORUS	P.185
70	DISTORTION → FLANGER	P.185
71	DISTORTION → DELAY	P.185
72	ENHANCER → CHORUS	P.185
73	ENHANCER → FLANGER	P.186
74	ENHANCER → DELAY	P.186
75	CHORUS → DELAY	P.186
76	FLANGER → DELAY	P.187
77	CHORUS → FLANGER	P.187
PIANO (1 type)		
78	SYMPATHETIC RESONANCE	P.187

About Note

Some effect parameters (such as Rate or Delay Time) can be set in terms of a note value.

Such parameters have a num/note switch that lets you specify whether you will set the value as a note value or as a numerical value.

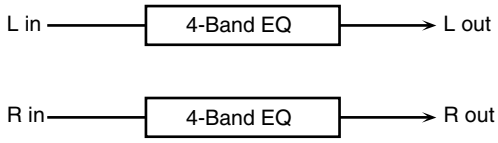
If you want to set Rate (Delay Time) as a numerical value, set the num/note switch to "Hz" ("msec"). If you want to set it as a note value, set the num/note switch to "NOTE."

NOTE

If a parameter whose num/note switch is set to "NOTE" is specified as a destination for multi-effect control, you will not be able to use multi-effect control to control that parameter.

01: EQUALIZER

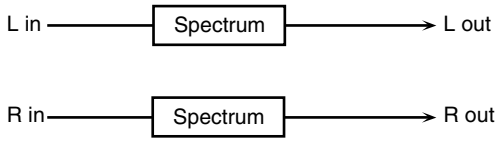
This is a four-band stereo equalizer (low, mid x 2, high).



Parameter	Value	Explanation
Low Freq	200, 400 Hz	Frequency of the low range
Low Gain #	-15– +15 dB	Gain of the low range
Mid1 Freq	200–8000 Hz	Frequency of the middle range 1
Mid1 Gain	-15– +15 dB	Gain of the middle range 1
Mid1 Q	0.5, 1.0, 2.0, 4.0, 8.0	Width of the middle range 1 Set a higher value for Q to narrow the range to be affected.
Mid2 Freq	200–8000 Hz	Frequency of the middle range 2
Mid2 Gain	-15– +15 dB	Gain of the middle range 2
Mid2 Q	0.5, 1.0, 2.0, 4.0, 8.0	Width of the middle range 2 Set a higher value for Q to narrow the range to be affected.
High Freq	2000, 4000, 8000 Hz	Frequency of the high range
High Gain #	-15– +15 dB	Gain of the high range
Level #	0–127	Output Level

02: SPECTRUM

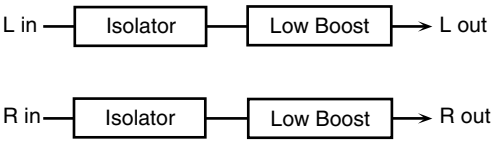
This is a stereo spectrum. Spectrum is a type of filter which modifies the timbre by boosting or cutting the level at specific frequencies.



Parameter	Value	Explanation
Band1 (250Hz)	-15– +15 dB	Gain of each frequency band
Band2 (500Hz)		
Band3 (1000Hz)		
Band4 (1250Hz)		
Band5 (2000Hz)		
Band6 (3150Hz)		
Band7 (4000Hz)		
Band8 (8000Hz)		
Q	0.5, 1.0, 2.0, 4.0, 8.0	Simultaneously adjusts the width of the adjusted ranges for all the frequency bands.
Level #	0–127	Output Level

03: ISOLATOR

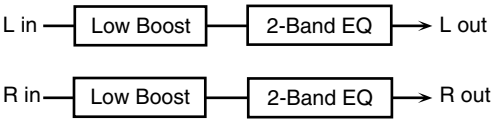
This is an equalizer which cuts the volume greatly, allowing you to add a special effect to the sound by cutting the volume in varying ranges.



Parameter	Value	Explanation
Boost/ Cut Low #	-60– +4 dB	These boost and cut each of the High, Middle, and Low frequency ranges. At -60 dB, the sound becomes inaudible. 0 dB is equivalent to the input level of the sound.
Boost/ Cut Mid #		
Boost/ Cut High #		
Anti Phase Low Sw	OFF, ON	Turns the Anti-Phase function on and off for the Low frequency ranges. When turned on, the counter-channel of stereo sound is inverted and added to the signal.
Anti Phase Low Level	0–127	Adjusts the level settings for the Low frequency ranges. Adjusting this level for certain frequencies allows you to lend emphasis to specific parts. (This is effective only for stereo source.)
Anti Phase Mid Sw	OFF, ON	Settings of the Anti-Phase function for the Middle frequency ranges The parameters are the same as for the Low frequency ranges.
Anti Phase Mid Level	0–127	
Low Boost Sw	OFF, ON	Turns Low Booster on/off. This emphasizes the bottom to create a heavy bass sound.
Low Boost Level	0–127	Increasing this value gives you a heavier low end. * Depending on the Isolator and filter settings this effect may be hard to distinguish.
Level	0–127	Output Level

04: LOW BOOST

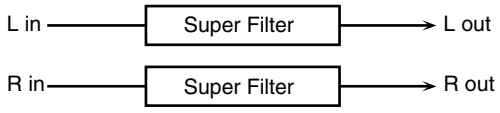
Boosts the volume of the lower range, creating powerful lows.



Parameter	Value	Explanation
Boost Frequency #	50–125 Hz	Center frequency at which the lower range will be boosted
Boost Gain #	0– +12 dB	Amount by which the lower range will be boosted
Boost Width	WIDE, MID, NARROW	Width of the lower range that will be boosted
Low Gain	-15– +15 dB	Gain of the low frequency range
High Gain	-15– +15 dB	Gain of the high frequency range
Level	0–127	Output level

05: SUPER FILTER

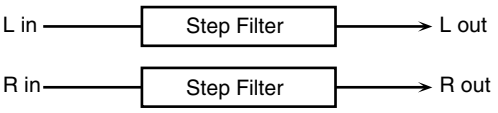
This is a filter with an extremely sharp slope. The cutoff frequency can be varied cyclically.



Parameter	Value	Explanation
Filter Type	LPF, BPF, HPF, NOTCH	Filter type Frequency range that will pass through each filter **LPF**: frequencies below the cutoff **BPF:** frequencies in the region of the cutoff **HPF:** frequencies above the cutoff **NOTCH:** frequencies other than the region of the cutoff
Filter Slope	-12, -24, -36 dB	Amount of attenuation per octave **-36 dB:** extremely steep **-24 dB:** steep **-12 dB:** gentle
Filter Cutoff #	0–127	Cutoff frequency of the filter Increasing this value will raise the cutoff frequency.
Filter Resonance #	0–127	Filter resonance level Increasing this value will emphasize the region near the cutoff frequency.
Filter Gain	0– +12 dB	Amount of boost for the filter output
Modulation Sw	OFF,ON	On/off switch for cyclic change
Modulation Wave	TRI, SQR, SIN, SAW1, SAW2	How the cutoff frequency will be modulated **TRI:** triangle wave **SQR:** square wave **SIN:** sine wave **SAW1:** sawtooth wave (upward) **SAW2:** sawtooth wave (downward)
		
Rate #	0.05–10.00 Hz, note	Rate of modulation
Depth	0–127	Depth of modulation
Attack #	0–127	Speed at which the cutoff frequency will change This is effective if Modulation Wave is SQR, SAW1, or SAW2.
Level	0–127	Output level

06: STEP FILTER

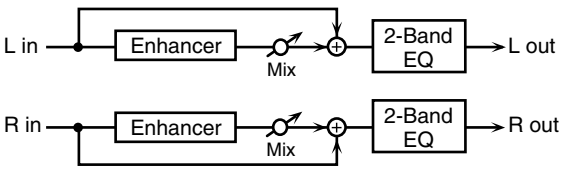
This is a filter whose cutoff frequency can be modulated in steps. You can specify the pattern by which the cutoff frequency will change.



Parameter	Value	Explanation
Step 01–16	0–127	Cutoff frequency at each step
Rate #	0.05–10.00 Hz, note	Rate of modulation
Attack #	0–127	Speed at which the cutoff frequency changes between steps
Filter Type	LPF, BPF, HPF, NOTCH	Filter type Frequency range that will pass through each filter **LPF:** frequencies below the cutoff **BPF:** frequencies in the region of the cutoff **HPF:** frequencies above the cutoff **NOTCH:** frequencies other than the region of the cutoff
Filter Slope	-12, -24, -36 dB	Amount of attenuation per octave **-12 dB:** gentle **-24 dB:** steep **-36 dB:** extremely steep
Filter Resonance #	0–127	Filter resonance level Increasing this value will emphasize the region near the cutoff frequency.
Filter Gain	0– +12 dB	Amount of boost for the filter output
Level	0–127	Output level

07: ENHANCER

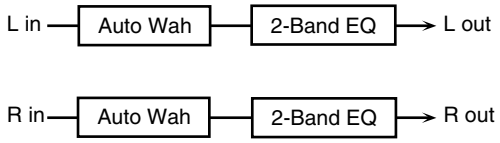
Controls the overtone structure of the high frequencies, adding sparkle and tightness to the sound.



Parameter	Value	Explanation
Sens #	0–127	Sensitivity of the enhancer
Mix #	0–127	Level of the overtones generated by the enhancer
Low Gain	-15– +15 dB	Gain of the low range
High Gain	-15– +15 dB	Gain of the high range
Level	0–127	Output Level

08: AUTO WAH

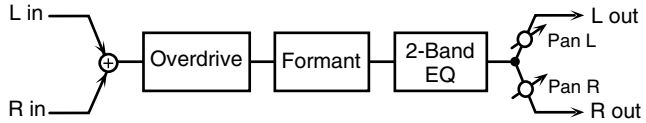
Cyclically controls a filter to create cyclic change in timbre.



Parameter	Value	Explanation
Filter Type	LPF, BPF	Type of filter **LPF:** The wah effect will be applied over a wide frequency range. **BPF:** The wah effect will be applied over a narrow frequency range.
Manual #	0–127	Adjusts the center frequency at which the effect is applied.
Peak	0–127	Adjusts the amount of the wah effect that will occur in the range of the center frequency. Set a higher value for Q to narrow the range to be affected.
Sens #	0–127	Adjusts the sensitivity with which the filter is controlled.
Polarity	UP, DOWN	Sets the direction in which the frequency will change when the auto-wah filter is modulated. **UP:** The filter will change toward a higher frequency. **DOWN:** The filter will change toward a lower frequency.
Rate #	0.05–10.00 Hz, note	Frequency of modulation
Depth #	0–127	Depth of modulation
Phase #	0–180 deg	Adjusts the degree of phase shift of the left and right sounds when the wah effect is applied.
Low Gain	-15– +15 dB	Gain of the low range
High Gain	-15– +15 dB	Gain of the high range
Level	0–127	Output Level

09: HUMANIZER

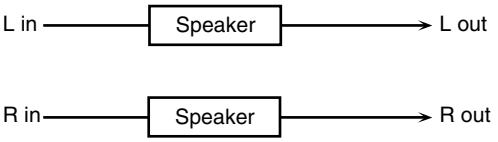
Adds a vowel character to the sound, making it similar to a human voice.



Parameter	Value	Explanation
Drive Sw	OFF, ON	Turns Drive on/off.
Drive #	0–127	Degree of distortion Also changes the volume.
Vowel1	a, e, i, o, u	Selects the vowel.
Vowel2	a, e, i, o, u	
Rate #	0.05–10.00 Hz, note	Frequency at which the two vowels switch
Depth #	0–127	Effect depth
Input Sync Sw	OFF, ON	Determines whether the LFO for switching the vowels is reset by the input signal (ON) or not (OFF).
Input Sync Threshold	0–127	Volume level at which reset is applied
Manual #	0–100	Point at which Vowel 1/2 switch **49 or less:** Vowel 1 will have a longer duration. **50:** Vowel 1 and 2 will be of equal duration. **51 or more:** Vowel 2 will have a longer duration.
Low Gain	-15– +15 dB	Gain of the low frequency range
High Gain	-15– +15 dB	Gain of the high frequency range
Pan #	L64–63R	Stereo location of the output
Level	0–127	Output level

10: SPEAKER SIMULATOR

Simulates the speaker type and mic settings used to record the speaker sound.



Parameter	Value	Explanation
Speaker Type	(See the table right.)	Type of speaker
Mic Setting	1, 2, 3	Adjusts the location of the mic that is recording the sound of the speaker. This can be adjusted in three steps, with the mic becoming more distant in the order of 1, 2, and 3.
Mic Level #	0–127	Volume of the microphone
Direct Level #	0–127	Volume of the direct sound
Level #	0–127	Output Level

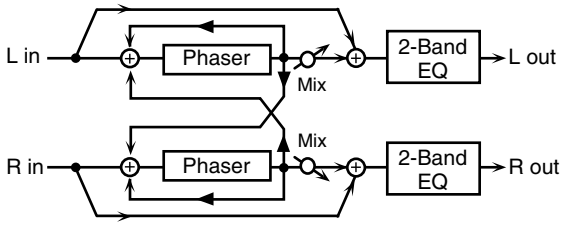
Specifications of each Speaker Type

The speaker column indicates the diameter of each speaker unit (in inches) and the number of units.

Type	Cabinet	Speaker	Microphone
SMALL 1	small open-back enclosure	10	dynamic
SMALL 2	small open-back enclosure	10	dynamic
MIDDLE	open back enclosure	12 x 1	dynamic
JC-120	open back enclosure	12 x 2	dynamic
BUILT-IN 1	open back enclosure	12 x 2	dynamic
BUILT-IN 2	open back enclosure	12 x 2	condenser
BUILT-IN 3	open back enclosure	12 x 2	condenser
BUILT-IN 4	open back enclosure	12 x 2	condenser
BUILT-IN 5	open back enclosure	12 x 2	condenser
BG STACK 1	sealed enclosure	12 x 2	condenser
BG STACK 2	large sealed enclosure	12 x 2	condenser
MS STACK 1	large sealed enclosure	12 x 4	condenser
MS STACK 2	large sealed enclosure	12 x 4	condenser
METAL STACK	large double stack	12 x 4	condenser
2-STACK	large double stack	12 x 4	condenser
3-STACK	large triple stack	12 x 4	condenser

11: PHASER

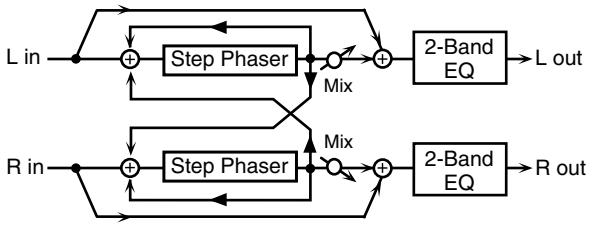
A phase-shifted sound is added to the original sound and modulated.



Parameter	Value	Explanation
Mode	4-STAGE, 8-STAGE, 12-STAGE	Number of stages in the phaser
Manual #	0–127	Adjusts the basic frequency from which the sound will be modulated.
Rate #	0.05–10.00 Hz, note	Frequency of modulation
Depth	0–127	Depth of modulation
Polarity	INVERSE, SYNCHRO	Selects whether the left and right phase of the modulation will be the same or the opposite. **INVERSE:** The left and right phase will be opposite. When using a mono source, this spreads the sound. **SYNCHRO:** The left and right phase will be the same. Select this when inputting a stereo source.
Resonance #	0–127	Amount of feedback
Cross Feedback	-98– +98 %	Adjusts the proportion of the phaser sound that is fed back into the effect. Negative (-) settings will invert the phase.
Mix #	0–127	Level of the phase-shifted sound
Low Gain	-15– +15 dB	Gain of the low range
High Gain	-15– +15 dB	Gain of the high range
Level	0–127	Output Level

12: STEP PHASER

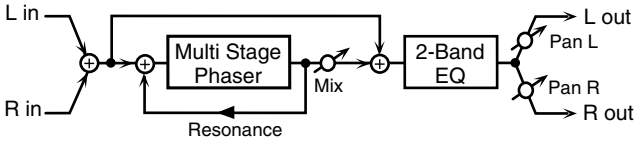
The phaser effect will be varied gradually.



Parameter	Value	Explanation
Mode	4-STAGE, 8-STAGE, 12-STAGE	Number of stages in the phaser
Manual #	0–127	Adjusts the basic frequency from which the sound will be modulated.
Rate #	0.05–10.00 Hz, note	Frequency of modulation
Depth	0–127	Depth of modulation
Polarity	INVERSE, SYNCHRO	Selects whether the left and right phase of the modulation will be the same or the opposite. **INVERSE:** The left and right phase will be opposite. When using a mono source, this spreads the sound. **SYNCHRO:** The left and right phase will be the same. Select this when inputting a stereo source.
Resonance #	0–127	Amount of feedback
Cross Feedback	-98– +98 %	Adjusts the proportion of the phaser sound that is fed back into the effect. Negative (-) settings will invert the phase.
Step Rate #	0.10–20.00 Hz, note	Rate of the step-wise change in the phaser effect
Mix #	0–127	Level of the phase-shifted sound
Low Gain	-15– +15 dB	Gain of the low range
High Gain	-15– +15 dB	Gain of the high range
Level	0–127	Output Level

13: MULTI STAGE PHASER

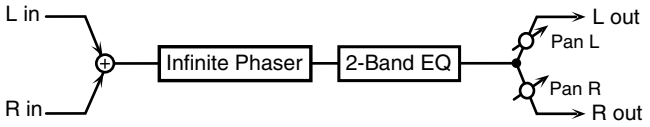
Extremely high settings of the phase difference produce a deep phaser effect.



Parameter	Value	Explanation
Mode	4-STAGE, 8-STAGE, 12-STAGE, 16-STAGE, 20-STAGE, 24-STAGE	Number of phaser stages
Manual #	0–127	Adjusts the basic frequency from which the sound will be modulated.
Rate #	0.05–10.00 Hz, note	Frequency of modulation
Depth	0–127	Depth of modulation
Resonance #	0–127	Amount of feedback
Mix #	0–127	Level of the phase-shifted sound
Pan #	L64–63R	Stereo location of the output sound
Low Gain	-15– +15 dB	Gain of the low range
High Gain	-15– +15 dB	Gain of the high range
Level	0–127	Output Level

14: INFINITE PHASER

A phaser that continues raising/lowering the frequency at which the sound is modulated.



Parameter	Value	Explanation
Mode	1, 2, 3, 4	Higher values will produce a deeper phaser effect.
Speed #	-100– +100	Speed at which to raise or lower the frequency at which the sound is modulated (+: upward / -: downward)
Resonance #	0–127	Amount of feedback
Mix #	0–127	Volume of the phase-shifted sound
Pan #	L64–63R	Panning of the output sound
Low Gain	-15– +15 dB	Amount of boost/cut for the low-frequency range
High Gain	-15– +15 dB	Amount of boost/cut for the high-frequency range
Level	0–127	Output volume

15: RING MODULATOR

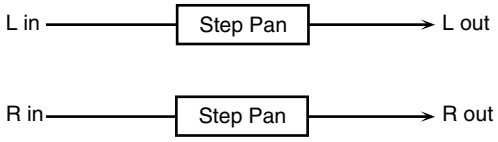
This is an effect that applies amplitude modulation (AM) to the input signal, producing bell-like sounds. You can also change the modulation frequency in response to changes in the volume of the sound sent into the effect.

16: STEP RING MODULATOR

This is a ring modulator that us7

19: STEP PAN

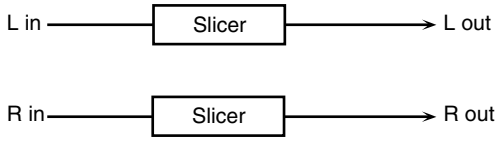
This uses a 16-step sequence to vary the panning of the sound.



Parameter	Value	Explanation
Step 01–16	L64–63R	Pan at each step
Rate #	0.05–10.00 Hz, note	Rate at which the 16-step sequence will cycle
Attack #	0–127	Speed at which the pan changes between steps
Input Sync Sw	OFF, ON	Specifies whether an input note will cause the sequence to resume from the first step of the sequence (ON) or not (OFF)
Input Sync Threshold	0–127	Volume at which an input note will be detected
Level	0–127	Output volume

20: SLICER

By applying successive cuts to the sound, this effect turns a conventional sound into a sound that appears to be played as a backing phrase. This is especially effective when applied to sustain-type sounds.



Parameter	Value	Explanation
Step 01–16	0–127	Level at each step
Rate #	0.05–10.00 Hz, note	Rate at which the 16-step sequence will cycle
Attack #	0–127	Speed at which the level changes between steps
Input Sync Sw	OFF, ON	Specifies whether an input note will cause the sequence to resume from the first step of the sequence (ON) or not (OFF)
Input Sync Threshold	0–127	Volume at which an input note will be detected
Mode	LEGATO, SLASH	Sets the manner in which the volume changes as one step progresses to the next. **LEGATO:** The change in volume from one step's level to the next remains unaltered. If the level of a following step is the same as the one preceding it, there is no change in volume. **SLASH:** The level is momentarily set to 0 before progressing to the level of the next step. This change in volume occurs even if the level of the following step is the same as the preceding step.
Shuffle #	0–127	Timing of volume changes in levels for even-numbered steps (step 2, step 4, step 6...). The higher the value, the later the beat progresses.
Level	0–127	Output level

21: ROTARY

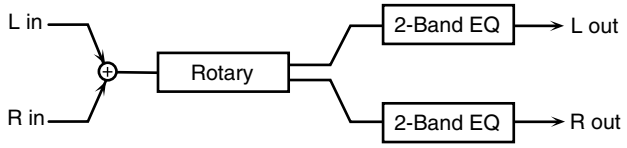
The Rotary effect simulates the sound of the rotary speakers often used with the electric organs of the past. Since the movement of the high range and low range rotors can be set independently, the unique type of modulation characteristic of these speakers can be simulated quite closely. This effect is most suitable for electric organ Patches.

Parameter	Value	Explanation
Speed #	SLOW, FAST	Simultaneously switch the rotational speed of the low frequency rotor and high frequency rotor. **SLOW:** Slows down the rotation to the Slow Rate. **FAST:** Speeds up the rotation to the Fast Rate.
Woofer Slow Speed	0.05–10.00 Hz	Slow speed (SLOW) of the low frequency rotor
Woofer Fast Speed	0.05–10.00 Hz	Fast speed (FAST) of the low frequency rotor
Woofer Acceleration	0–15	Adjusts the time it takes the low frequency rotor to reach the newly selected speed when switching from fast to slow (or slow to fast) speed. Lower values will require longer times.
Woofer Level	0–127	Volume of the low frequency rotor
Tweeter Slow Speed	0.05–10.00 Hz	Settings of the high frequency rotor The parameters are the same as for the low frequency rotor
Tweeter Fast Speed	0.05–10.00 Hz	
Tweeter Acceleration	0–15	
Tweeter Level	0–127	
Separation	0–127	Spatial dispersion of the sound
Level #	0–127	Output Level

22: VK ROTARY

This type provides modified response for the rotary speaker, with the low end boosted further.

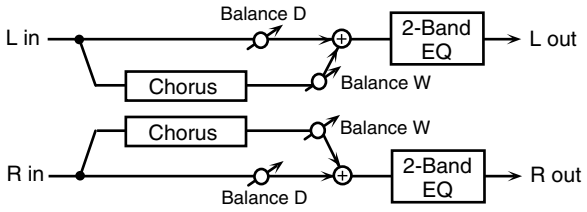
This effect features the same specifications as the VK-7's built-in rotary speaker.



Parameter	Value	Explanation
Speed #	SLOW, FAST	Rotational speed of the rotating speaker
Brake #	OFF, ON	Switches the rotation of the rotary speaker. When this is turned on, the rotation will gradually stop. When it is turned off, the rotation will gradually resume.
Woofer Slow Speed	0.05–10.00 Hz	Low-speed rotation speed of the woofer
Woofer Fast Speed	0.05–10.00 Hz	High-speed rotation speed of the woofer
Woofer Trans Up	0–127	Adjusts the rate at which the woofer rotation speeds up when the rotation is switched from Slow to Fast.
Woofer Trans Down	0–127	Adjusts the rate at which the woofer rotation speeds up when the rotation is switched from Fast to Slow.
Woofer Level	0–127	Volume of the woofer
Tweeter Slow Speed	0.05–10.00 Hz	Settings of the tweeter The parameters are the same as for the woofer.
Tweeter Fast Speed	0.05–10.00 Hz	
Tweeter Trans Up	0–127	
Tweeter Trans Down	0–127	
Tweeter Level	0–127	
Spread	0–10	Sets the rotary speaker stereo image. The higher the value set, the wider the sound is spread out.
Low Gain	-15– +15 dB	Gain of the low range
High Gain	-15– +15 dB	Gain of the high range
Level #	0–127	Output Level

23: CHORUS

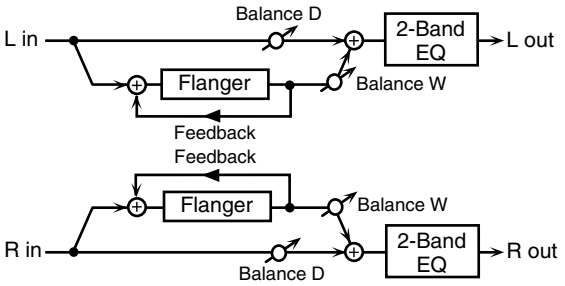
This is a stereo chorus. A filter is provided so that you can adjust the timbre of the chorus sound.



Parameter	Value	Explanation
Filter Type	OFF, LPF, HPF	Type of filter **OFF:** no filter is used **LPF:** cuts the frequency range above the Cutoff Freq **HPF:** cuts the frequency range below the Cutoff Freq
Cutoff Freq	200–8000 Hz	Basic frequency of the filter
Pre Delay	0.0–100.0 ms	Adjusts the delay time from the direct sound until the chorus sound is heard.
Rate #	0.05–10.00 Hz, note	Frequency of modulation
Depth	0–127	Depth of modulation
Phase	0–180 deg	Spatial spread of the sound
Low Gain	-15– +15 dB	Gain of the low range
High Gain	-15– +15 dB	Gain of the high range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the chorus sound (W)
Level	0–127	Output Level

24: FLANGER

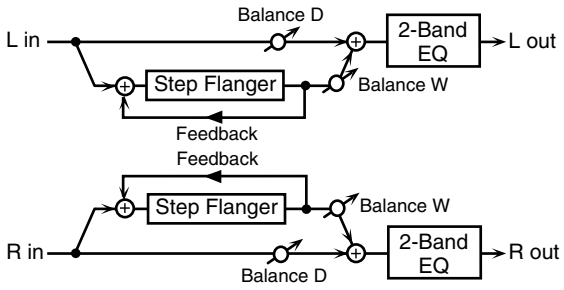
This is a stereo flanger. (The LFO has the same phase for left and right.) It produces a metallic resonance that rises and falls like a jet airplane taking off or landing. A filter is provided so that you can adjust the timbre of the flanged sound.



Parameter	Value	Explanation
Filter Type	OFF, LPF, HPF	Type of filter **OFF:** no filter is used **LPF:** cuts the frequency range above the Cutoff Freq **HPF:** cuts the frequency range below the Cutoff Freq
Cutoff Freq	200–8000 Hz	Basic frequency of the filter
Pre Delay	0.0–100.0 ms	Adjusts the delay time from when the direct sound begins until the flanger sound is heard.
Rate #	0.05–10.00 Hz, note	Frequency of modulation
Depth	0–127	Depth of modulation
Phase	0–180 deg	Spatial spread of the sound
Feedback #	-98– +98 %	Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.
Low Gain	-15– +15 dB	Gain of the low range
High Gain	-15– +15 dB	Gain of the high range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the flanger sound (W)
Level	0–127	Output Level

25: STEP FLANGER

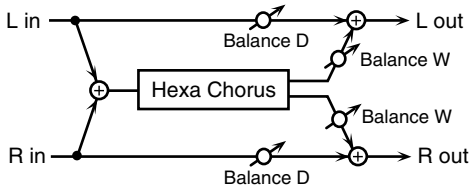
This is a flanger in which the flanger pitch changes in steps. The speed at which the pitch changes can also be specified in terms of a note-value of a specified tempo.



Parameter	Value	Explanation
Filter Type	OFF, LPF, HPF	Type of filter **OFF:** no filter is used **LPF:** cuts the frequency range above the Cutoff Freq **HPF:** cuts the frequency range below the Cutoff Freq
Cutoff Freq	200–8000 Hz	Basic frequency of the filter
Pre Delay	0.0–100.0 ms	Adjusts the delay time from when the direct sound begins until the flanger sound is heard.
Rate #	0.05–10.00 Hz, note	Frequency of modulation
Depth	0–127	Depth of modulation
Phase	0–180 deg	Spatial spread of the sound
Feedback #	-98– +98 %	Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.
Step Rate #	0.10–20.00 Hz, note	Rate (period) of pitch change
Low Gain	-15– +15 dB	Gain of the low range
High Gain	-15– +15 dB	Gain of the high range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the flanger sound (W)
Level	0–127	Output Level

26: HEXA-CHORUS

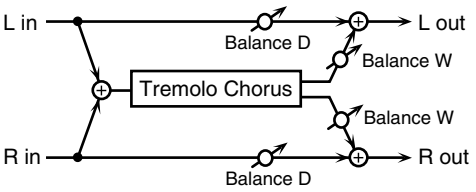
Uses a six-phase chorus (six layers of chorused sound) to give richness and spatial spread to the sound.



Parameter	Value	Explanation
Pre Delay	0.0–100.0 ms	Adjusts the delay time from the direct sound until the chorus sound is heard.
Rate #	0.05–10.00 Hz, note	Frequency of modulation
Depth	0–127	Depth of modulation
Pre Delay Deviation	0–20	Adjusts the differences in Pre Delay between each chorus sound.
Depth Deviation	-20– +20	Adjusts the difference in modulation depth between each chorus sound.
Pan Deviation	0–20	Adjusts the difference in stereo location between each chorus sound. **0:** All chorus sounds will be in the center. **20:** Each chorus sound will be spaced at 60 degree intervals relative to the center.
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the chorus sound (W)
Level	0–127	Output Level

27: TREMOLO CHORUS

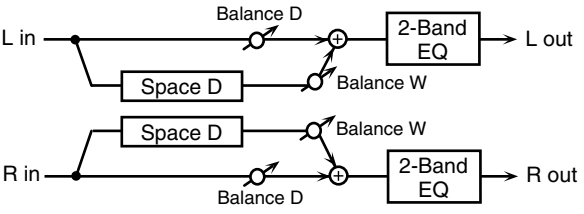
This is a chorus effect with added Tremolo (cyclic modulation of volume).



Parameter	Value	Explanation
Pre Delay	0.0–100.0 ms	Adjusts the delay time from the direct sound until the chorus sound is heard.
Chorus Rate #	0.05–10.00 Hz, note	Modulation frequency of the chorus effect
Chorus Depth	0–127	Modulation depth of the chorus effect
Tremolo Rate #	0.05–10.00 Hz, note	Modulation frequency of the tremolo effect
Tremolo Separation	0–127	Spread of the tremolo effect
Tremolo Phase	0–180 deg	Spread of the tremolo effect
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the tremolo chorus sound (W)
Level	0–127	Output Level

28: SPACE-D

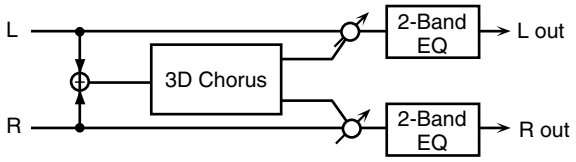
This is a multiple chorus that applies two-phase modulation in stereo. It gives no impression of modulation, but produces a transparent chorus effect.



Parameter	Value	Explanation
Pre Delay	0.0–100.0 ms	Adjusts the delay time from the direct sound until the chorus sound is heard.
Rate #	0.05–10.00 Hz, note	Frequency of modulation
Depth	0–127	Depth of modulation
Phase	0–180 deg	Spatial spread of the sound
Low Gain	-15– +15 dB	Gain of the low range
High Gain	-15– +15 dB	Gain of the high range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the chorus sound (W)
Level	0–127	Output Level

29: 3D CHORUS

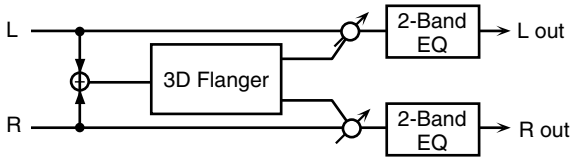
This applies a 3D effect to the chorus sound. The chorus sound will be positioned 90 degrees left and 90 degrees right.



Parameter	Value	Explanation
Filter Type	OFF, LPF, HPF	Type of filter **OFF:** no filter is used **LPF:** cuts the frequency range above the Cutoff Freq **HPF:** cuts the frequency range below the Cutoff Freq
Cutoff Freq	200–8000 Hz	Basic frequency of the filter
Pre Delay	0.0–100.0 ms	Adjusts the delay time from the direct sound until the chorus sound is heard.
Rate #	0.05–10.00 Hz, note	Frequency of modulation
Depth	0–127	Modulation depth of the chorus effect
Phase	0–180 deg	Spatial spread of the sound
Output Mode	SPEAKER, PHONES	Adjusts the method that will be used to hear the sound that is output to the OUTPUT jacks. The optimal 3D effect will be achieved if you select **SPEAKER** when using speakers, or **PHONES** when using headphones.
Low Gain	-15– +15 dB	Gain of the low range
High Gain	-15– +15 dB	Gain of the high range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the chorus sound (W)
Level	0–127	Output Level

30: 3D FLANGER

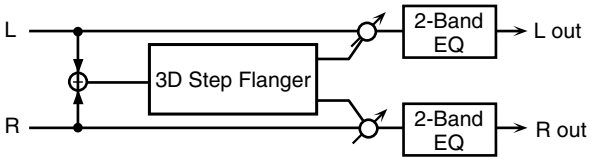
This applies a 3D effect to the flanger sound. The flanger sound will be positioned 90 degrees left and 90 degrees right.



Parameter	Value	Explanation
Filter Type	OFF, LPF, HPF	Type of filter **OFF:** no filter is used **LPF:** cuts the frequency range above the Cutoff Freq **HPF:** cuts the frequency range below the Cutoff Freq
Cutoff Freq	200–8000 Hz	Basic frequency of the filter
Pre Delay	0.0–100.0 ms	Adjusts the delay time from when the direct sound begins until the flanger sound is heard.
Rate #	0.05–10.00 Hz, note	Frequency of modulation
Depth	0–127	Depth of modulation
Phase	0–180 deg	Spatial spread of the sound
Feedback #	-98– +98 %	Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.
Output Mode	SPEAKER, PHONES	Adjusts the method that will be used to hear the sound that is output to the OUTPUT jacks. The optimal 3D effect will be achieved if you select **SPEAKER** when using speakers, or **PHONES** when using headphones.
Low Gain	-15– +15 dB	Gain of the low range
High Gain	-15– +15 dB	Gain of the high range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the flanger sound (W)
Level	0–127	Output Level

31: 3D STEP FLANGER

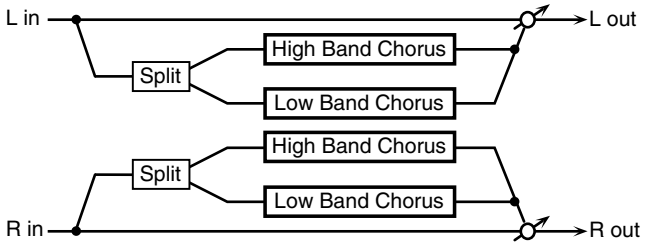
This applies a 3D effect to the step flanger sound. The flanger sound will be positioned 90 degrees left and 90 degrees right.



Parameter	Value	Explanation
Filter Type	OFF, LPF, HPF	Type of filter **OFF:** no filter is used **LPF:** cuts the frequency range above the Cutoff Freq **HPF:** cuts the frequency range below the Cutoff Freq
Cutoff Freq	200–8000 Hz	Basic frequency of the filter
Pre Delay	0.0–100.0 ms	Adjusts the delay time from when the direct sound begins until the flanger sound is heard.
Rate #	0.05–10.00 Hz, note	Frequency of modulation
Depth	0–127	Depth of modulation
Phase	0–180 deg	Spatial spread of the sound
Feedback #	-98– +98 %	Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.
Step Rate #	0.10–20.00 Hz, note	Rate (period) of pitch change
Output Mode	SPEAKER, PHONES	Adjusts the method that will be used to hear the sound that is output to the OUTPUT jacks. The optimal 3D effect will be achieved if you select **SPEAKER** when using speakers, or **PHONES** when using headphones.
Low Gain	-15– +15 dB	Gain of the low range
High Gain	-15– +15 dB	Gain of the high range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the flanger sound (W)
Level	0–127	Output Level

32: 2BAND CHORUS

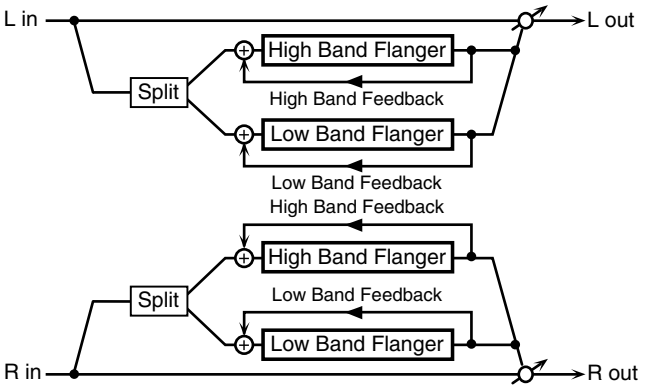
A chorus effect that lets you apply an effect independently to the low-frequency and high-frequency ranges.



Parameter	Value	Explanation
Split Freq	200–8000 Hz	Frequency at which the low and high ranges will be divided
Low Pre Delay	0.0–100.0 ms	Delay time from when the original sound is heard to when the low-range chorus sound is heard
Low Rate #	0.05–10.00 Hz, note	Rate at which the low-range chorus sound is modulated
Low Depth	0–127	Modulation depth for the low-range chorus sound
Low Phase	0–180 deg	Spaciousness of the low-range chorus sound
High Pre Delay	0.0–100.0 ms	Delay time from when the original sound is heard to when the high-range chorus sound is heard
High Rate #	0.05–10.00 Hz, note	Rate at which the low-range chorus sound is modulated
High Depth	0–127	Modulation depth for the high-range chorus sound
High Phase	0–180 deg	Spaciousness of the high-range chorus sound
Balance #	D100:0W–D0:100W	Volume balance of the original sound (D) and chorus sound (W)
Level	0–127	Output volume

33: 2BAND FLANGER

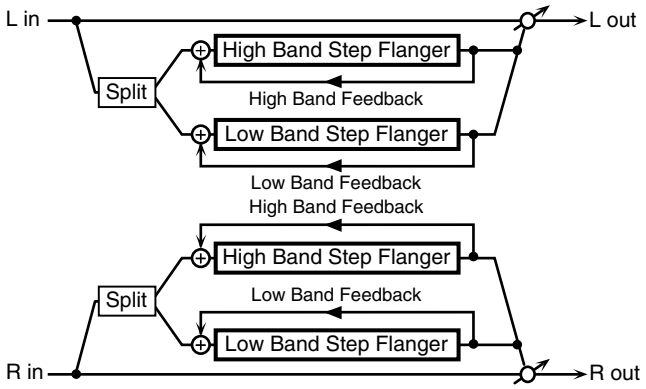
A flanger that lets you apply an effect independently to the low-frequency and high-frequency ranges.



Parameter	Value	Explanation
Split Freq	200–8000 Hz	Frequency at which the low and high ranges will be divided
Low Pre Delay	0.0–100.0 ms	Delay time from when the original sound is heard to when the low-range flanger sound is heard
Low Rate #	0.05–10.00 Hz, note	Rate at which the low-range flanger sound is modulated
Low Depth	0–127	Modulation depth for the low-range flanger sound
Low Phase	0–180 deg	Spaciousness of the low-range flanger sound
Low Feedback #	-98– +98%	Proportion of the low-range flanger sound that is to be returned to the input (negative values invert the phase)
High Pre Delay	0.0–100.0 ms	Delay time from when the original sound is heard to when the high-range flanger sound is heard
High Rate #	0.05–10.00 Hz, note	Rate at which the high-range flanger sound is modulated
High Depth	0–127	Modulation depth for the high-range flanger sound
High Phase	0–180 deg	Spaciousness of the high-range flanger sound
High Feedback #	-98– +98%	Proportion of the high-range flanger sound that is to be returned to the input (negative values invert the phase)
Balance #	D100:0W–D0:100W	Volume balance of the original sound (D) and flanger sound (W)
Level	0–127	Output volume

34: 2BAND STEP FLANGER

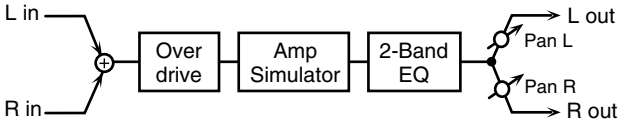
A step flanger that lets you apply an effect independently to the low-frequency and high-frequency ranges.



Parameter	Value	Explanation
Split Freq	200–8000 Hz	Frequency at which the low and high ranges will be divided
Low Pre Delay	0.0–100.0 ms	Delay time from when the original sound is heard to when the low-range flanger sound is heard
Low Rate #	0.05–10.00 Hz, note	Rate at which the low-range flanger sound is modulated
Low Depth	0–127	Modulation depth for the low-range flanger sound
Low Phase	0–180 deg	Spaciousness of the low-range flanger sound
Low Feedback #	-98– +98%	Proportion of the low-range flanger sound that is to be returned to the input (negative values invert the phase)
Low Step Rate #	0.10–20.00 Hz, note	Rate at which the steps will cycle for the low-range flanger sound
High Pre Delay	0.0–100.0 ms	Delay time from when the original sound is heard to when the high-range flanger sound is heard
High Rate #	0.05–10.00 Hz, note	Rate at which the high-range flanger sound is modulated
High Depth	0–127	Modulation depth for the high-range flanger sound
High Phase	0–180 deg	Spaciousness of the high-range flanger sound
High Feedback #	-98– +98%	Proportion of the high-range flanger sound that is to be returned to the input (negative values invert the phase)
High Step Rate #	0.10–20.00 Hz, note	Rate at which the steps will cycle for the high-range flanger sound
Balance #	D100:0W–D0:100W	Volume balance of the original sound (D) and flanger sound (W)
Level	0–127	Output volume

35: OVERDRIVE

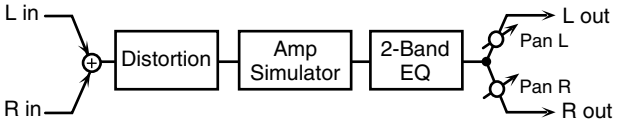
Creates a soft distortion similar to that produced by vacuum tube amplifiers.



Parameter	Value	Explanation
Drive #	0–127	Degree of distortion Also changes the volume.
Amp Type	SMALL, BUILT-IN, 2-STACK, 3-STACK	Type of guitar amp **SMALL:** small amp **BUILT-IN:** single-unit type amp **2-STACK:** large double stack amp **3-STACK:** large triple stack amp
Low Gain	-15– +15 dB	Gain of the low range
High Gain	-15– +15 dB	Gain of the high range
Pan #	L64–63R	Stereo location of the output sound
Level	0–127	Output Level

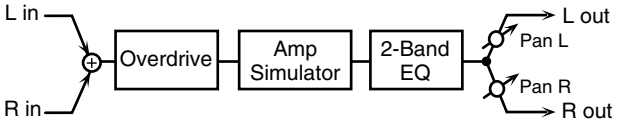
36: DISTORTION

Produces a more intense distortion than Overdrive. The parameters are the same as for "35: OVERDRIVE."



37: VS OVERDRIVE

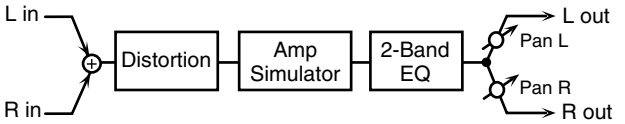
This is an overdrive that provides heavy distortion.



Parameter	Value	Explanation
Drive #	0–127	Degree of distortion Also changes the volume.
Tone #	0–127	Sound quality of the Overdrive effect
Amp Sw	OFF, ON	Turns the Amp Simulator on/off.
Amp Type	SMALL, BUILT-IN, 2-STACK, 3-STACK	Type of guitar amp **SMALL:** small amp **BUILT-IN:** single-unit type amp **2-STACK:** large double stack amp **3-STACK:** large triple stack amp
Low Gain	-15– +15 dB	Gain of the low range
High Gain	-15– +15 dB	Gain of the high range
Pan #	L64–63R	Stereo location of the output sound
Level	0–127	Output Level

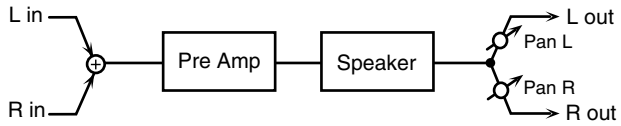
38: VS DISTORTION

This is a distortion effect that provides heavy distortion. The parameters are the same as for "37: VS OVERDRIVE."



39: GUITAR AMP SIMULATOR

This is an effect that simulates the sound of a guitar amplifier.



Parameter	Value	Explanation
Pre Amp Sw	OFF, ON	Turns the amp switch on/off.
Pre Amp Type	JC-120, CLEAN TWIN, MATCH DRIVE, BG LEAD, MS1959I, MS1959II, MS1959I+II, SLDN LEAD, METAL5150, METAL LEAD, OD-1, OD-2 TURBO, DISTORTION, FUZZ	Type of guitar amp
Pre Amp Volume #	0–127	Volume and amount of distortion of the amp
Pre Amp Master #	0–127	Volume of the entire pre-amp
Pre Amp Gain	LOW, MIDDLE, HIGH	Amount of pre-amp distortion
Pre Amp Bass	0–127	Tone of the bass/mid/treble frequency range * Middle cannot be set if "Match Drive" is selected as the Pre Amp Type.
Pre Amp Middle		
Pre Amp Treble		
Pre Amp Presence	0–127 (MATCH DRIVE: -127 - 0)	Tone for the ultra-high frequency range
Pre Amp Bright	OFF, ON	Turning this "On" produces a sharper and brighter sound. * This parameter applies to the "JC-120," "Clean Twin," and "BG Lead" Pre Amp Types.
Speaker Sw	OFF, ON	Determines whether the signal passes through the speaker (ON), or not (OFF).
Speaker Type	(See the table below.)	Type of speaker
Mic Setting	1, 2, 3	Adjusts the location of the mic that's capturing the sound of the speaker. This can be adjusted in three steps, from 1 to 3, with the mic becoming more distant as the value increases.
Mic Level	0–127	Volume of the microphone
Direct Level	0–127	Volume of the direct sound
Pan #	L64–63R	Stereo location of the output
Level #	0–127	Output level

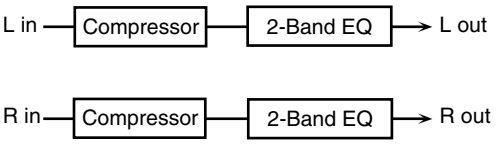
Specifications for each Speaker Type

The speaker column indicates the diameter of each speaker unit (in inches) and the number of units.

Type	Cabinet	Speaker	Microphone
SMALL 1	small open-back enclosure	10	dynamic
SMALL 2	small open-back enclosure	10	dynamic
MIDDLE	open back enclosure	12 x 1	dynamic
JC-120	open back enclosure	12 x 2	dynamic
BUILT-IN 1	open back enclosure	12 x 2	dynamic
BUILT-IN 2	open back enclosure	12 x 2	condenser
BUILT-IN 3	open back enclosure	12 x 2	condenser
BUILT-IN 4	open back enclosure	12 x 2	condenser
BUILT-IN 5	open back enclosure	12 x 2	condenser
BG STACK 1	sealed enclosure	12 x 2	condenser
BG STACK 2	large sealed enclosure	12 x 2	condenser
MS STACK 1	large sealed enclosure	12 x 4	condenser
MS STACK 2	large sealed enclosure	12 x 4	condenser
METAL STACK	large double stack	12 x 4	condenser
2-STACK	large double stack	12 x 4	condenser
3-STACK	large triple stack	12 x 4	condenser

40: COMPRESSOR

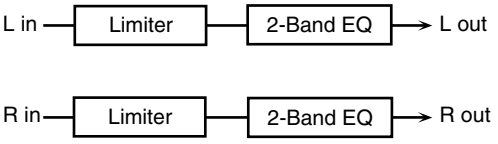
Flattens out high levels and boosts low levels, smoothing out fluctuations in volume.



Parameter	Value	Explanation
Attack #	0–127	Sets the speed at which compression starts
Threshold #	0–127	Adjusts the volume at which compression begins
Post Gain	0– +18 dB	Adjusts the output gain.
Low Gain	-15– +15 dB	Gain of the low frequency range
High Gain	-15– +15 dB	Gain of the high frequency range
Level #	0–127	Output level

41: LIMITER

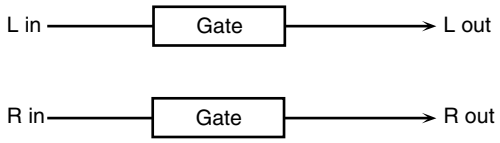
Compresses signals that exceed a specified volume level, preventing distortion from occurring.



Parameter	Value	Explanation
Release #	0–127	Adjusts the time after the signal volume falls below the Threshold Level until compression is no longer applied.
Threshold #	0–127	Adjusts the volume at which compression begins
Ratio	1.5:1, 2:1, 4:1, 100:1	Compression ratio
Post Gain	0– +18 dB	Adjusts the output gain.
Low Gain	-15– +15 dB	Gain of the low frequency range
High Gain	-15– +15 dB	Gain of the high frequency range
Level #	0–127	Output level

42: GATE

Cuts the reverb's delay according to the volume of the sound sent into the effect. Use this when you want to create an artificial-sounding decrease in the reverb's decay.

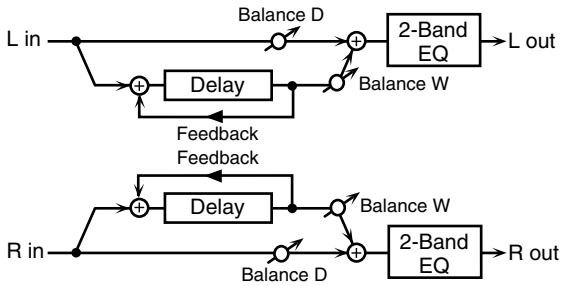


Parameter	Value	Explanation
Threshold #	0–127	Volume level at which the gate begins to close
Mode	GATE, DUCK	Type of gate **GATE:** The gate will close when the volume of the original sound decreases, cutting the original sound. **DUCK (Ducking):** The gate will close when the volume of the original sound increases, cutting the original sound.
Attack	0–127	Adjusts the time it takes for the gate to fully open after being triggered.
Hold	0–127	Adjusts the time it takes for the gate to start closing after the source sound falls beneath the Threshold.
Release	0–127	Adjusts the time it takes the gate to fully close after the hold time.
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Level	0–127	Output level

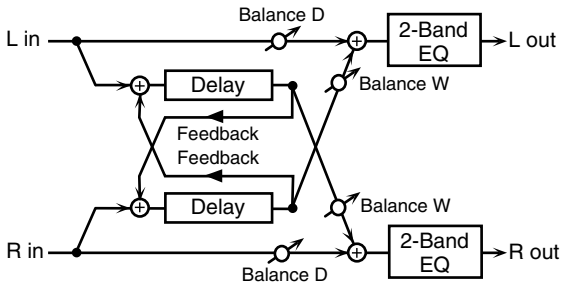
43: DELAY

This is a stereo delay.

When Feedback Mode is NORMAL:



When Feedback Mode is CROSS:



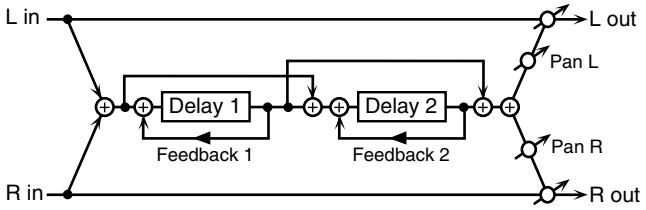
Parameter	Value	Explanation
Delay Left	0–1300 ms, note	Adjusts the time until the delay sound is heard.
Delay Right		
Phase Left	NORMAL, INVERSE	Phase of the delay sound
Phase Right		
Feedback Mode	NORMAL, CROSS	Selects the way in which delay sound is fed back into the effect. (See the figures above.)

44: LONG DELAY

A delay that provides a long delay time.

45: SERIAL DELAY

This delay connects two delay units in series. Feedback can be applied independently to each delay unit, allowing you to produce complex delay sounds.

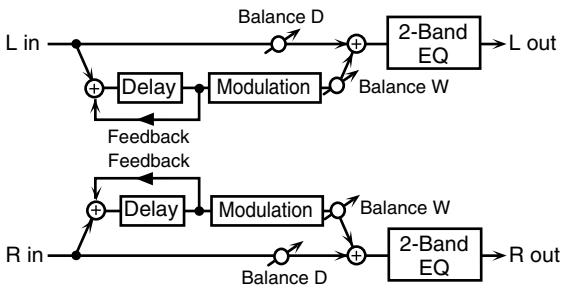


Parameter	Value	Explanation
Delay1 Time	0–1300 ms, note	Delay time from when sound is input to delay 1 until the delay sound is heard
Delay1 Feedback #	-98– +98%	Proportion of the delay sound that is to be returned to the input of delay 1 (negative values invert the phase)
Delay1 HF Damp	200–8000 Hz, BYPASS	Frequency at which the high-frequency content of the delayed sound of delay 1 will be cut (BYPASS: no cut)
Delay2 Time	0–1300 ms, note	Delay time from when sound is input to delay 2 until the delay sound is heard
Delay2 Feedback #	-98– +98%	Proportion of the delay sound that is to be returned to the input of delay 2 (negative values invert the phase)
Delay2 HF Damp	200–8000 Hz, BYPASS	Frequency at which the high-frequency content of the delayed sound of delay 2 will be cut (BYPASS: no cut)
Pan #	L64–63R	Panning of the delay sound
Low Gain	-15– +15 dB	Amount of boost/cut for the low-frequency range
High Gain	-15– +15 dB	Amount of boost/cut for the high-frequency range
Balance #	D100:0W–D0:100W	Volume balance of the original sound (D) and delay sound (W)
Level	0–127	Output volume

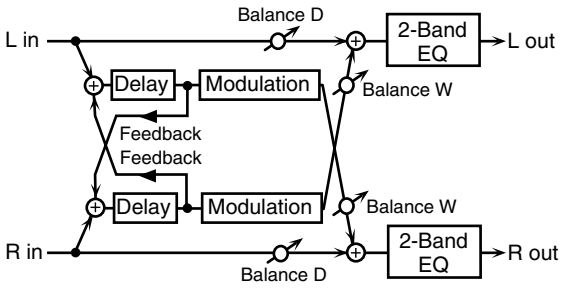
46: MODULATION DELAY

Adds modulation to the delayed sound.

When Feedback Mode is NORMAL:



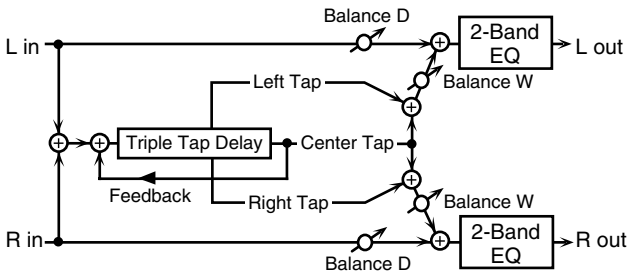
When Feedback Mode is CROSS:



Parameter	Value	Explanation
Delay Left	0–1300 ms, note	Adjusts the time until the delay sound is heard.
Delay Right		
Feedback Mode	NORMAL, CROSS	Selects the way in which delay sound is fed back into the effect (See the figures above.)
Feedback #	-98– +98 %	Adjusts the amount of the delay sound that's fed back into the effect. Negative (-) settings invert the phase.
HF Damp	200–8000 Hz, BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS.
Rate #	0.05–10.00 Hz, note	Frequency of modulation
Depth	0–127	Depth of modulation
Phase	0-180 deg	Spatial spread of the sound
Low Gain	-15– +15 dB	Gain of the low frequency range
High Gain	-15– +15 dB	Gain of the high frequency range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the delay sound (W)
Level	0–127	Output level

47: 3TAP PAN DELAY

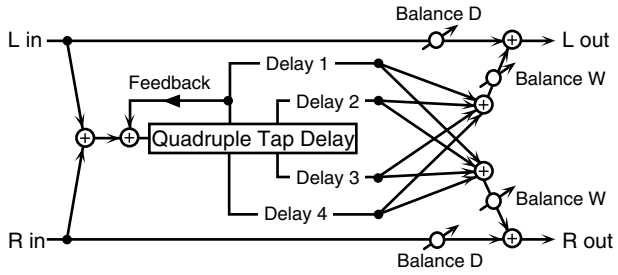
Produces three delay sounds; center, left and right.

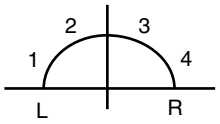


Parameter	Value	Explanation
Delay Left/ Right/Center	0–2600 ms, note	Adjusts the time until the delay sound is heard.
Center Feedback #	-98– +98 %	Adjusts the amount of the delay sound that's fed back into the effect. Negative (-) settings invert the phase.
HF Damp	200–8000 Hz, BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out. If you do not want to filter out any high frequencies, set this parameter to BYPASS.
Left/Right/ Center Level	0–127	Volume of each delay
Low Gain	-15– +15 dB	Gain of the low frequency range
High Gain	-15– +15 dB	Gain of the high frequency range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the delay sound (W)
Level	0–127	Output level

48: 4TAP PAN DELAY

This effect has four delays.



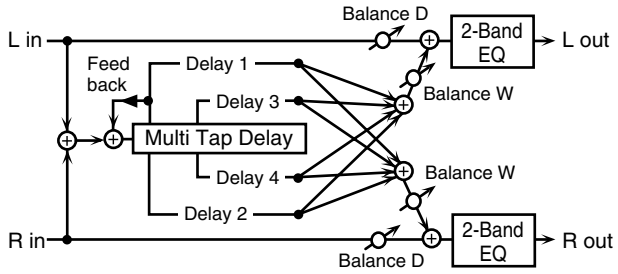


Stereo location of each delay

Parameter	Value	Explanation
Delay 1–4 Time	0–2600 ms, note	Adjusts the time until the delay sound is heard.
Delay 1 Feedback #	-98– +98 %	Adjusts the amount of the delay sound that's fed back into the effect. Negative (-) settings invert the phase.
HF Damp	200–8000 Hz, BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out. If you do not want to filter out any high frequencies, set this parameter to BYPASS.
Delay 1–4 Level	0–127	Volume of each delay
Low Gain	-15– +15 dB	Gain of the low frequency range
High Gain	-15– +15 dB	Gain of the high frequency range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the delay sound (W)
Level	0–127	Output level

49: MULTI TAP DELAY

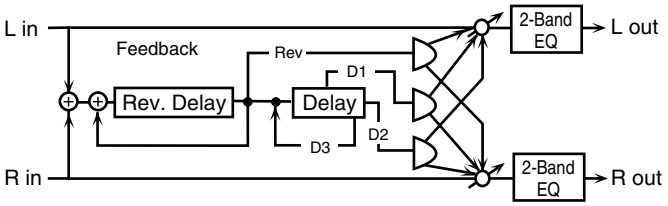
This effect provides four delays. Each of the Delay Time parameters can be set to a note length based on the selected tempo. You can also set the panning and level of each delay sound.



Parameter	Value	Explanation
Delay 1–4 Time	0–2600 ms, note	Adjusts the time until Delays 1–4 are heard.
Delay 1 Feedback #	-98– +98 %	Adjusts the amount of the delay sound that's fed back into the effect. Negative (-) settings invert the phase.
HF Damp	200–8000 Hz, BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any the high frequencies, set this parameter to BYPASS.
Delay 1–4 Pan	L64–63R	Stereo location of Delays 1–4
Delay 1–4 Level	0–127	Output level of Delays 1–4
Low Gain	-15– +15 dB	Gain of the low frequency range
High Gain	-15– +15 dB	Gain of the high frequency range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Level	0–127	Output level

50: REVERSE DELAY

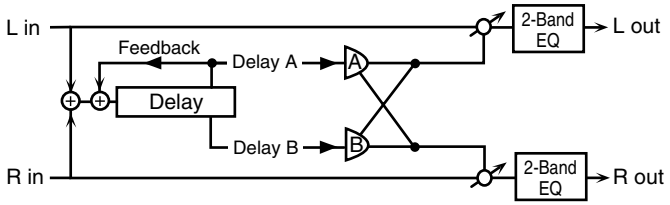
This is a reverse delay that adds a reversed and delayed sound to the input sound. A tap delay is connected immediately after the reverse delay.



Parameter	Value	Explanation
Threshold	0–127	Volume at which the reverse delay will begin to be applied
Rev Delay Time	0–1300 ms, note	Delay time from when sound is input into the reverse delay until the delay sound is heard
Rev Delay Feedback #	-98– +98%	Proportion of the delay sound that is to be returned to the input of the reverse delay (negative values invert the phase)
Rev Delay HF Damp	200–8000 Hz, BYPASS	Frequency at which the high-frequency content of the reverse-delayed sound will be cut (BYPASS: no cut)
Rev Delay Pan	L64–63R	Panning of the reverse delay sound
Rev Delay Level	0–127	Volume of the reverse delay sound
Delay 1 – 3 Time	0–1300 ms, note	Delay time from when sound is input into the tap delay until the delay sound is heard
Delay 3 Feedback #	-98– +98%	Proportion of the delay sound that is to be returned to the input of the tap delay (negative values invert the phase)
Delay HF Damp	200–8000 Hz, BYPASS	Frequency at which the low-frequency content of the tap delay sound will be cut (BYPASS: no cut)
Delay 1 Pan', 'Delay 2 Pan	L64–63R	Panning of the tap delay sounds
Delay 1 Level', 'Delay 2 Level	0–127	Volume of the tap delay sounds
Low Gain	-15– +15 dB	Amount of boost/cut for the low-frequency range
High Gain	-15– +15 dB	Amount of boost/cut for the high-frequency range
Balance #	D100:0W–D0:100W	Volume balance of the original sound (D) and delay sound (W)
Level	0–127	Output volume

51: SHUFFLE DELAY

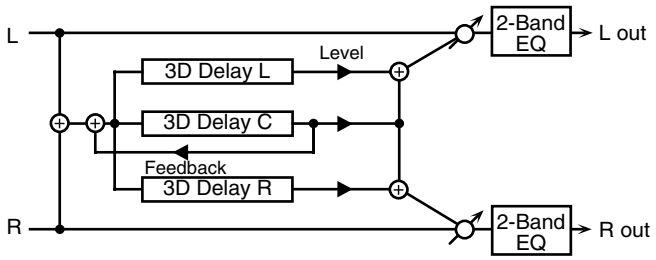
Adds a shuffle to the delay sound, giving the sound a bouncy delay effect with a swing feel.



Parameter	Value	Explanation
Delay Time #	0–2600 ms, note	Adjusts the time until the delay sound is heard.
Shuffle Rate #	0–100 %	Adjusts the ratio (as a percentage) of the time that elapses before Delay B sounds relative to the time that elapses before the Delay A sounds. When set to 100%, the delay times are the same.
Acceleration	0–15	Adjusts the time over which the Delay Time changes from the current setting to its specified new setting.
Feedback #	-98– +98 %	Adjusts the amount of the delay that's fed back into the effect. Negative (-) settings invert the phase.
HF Damp	200–8000 Hz, BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS.
Pan A/B	L64–63R	Stereo location of Delay A/B
Level A/B	0–127	Volume of delay A/B
Low Gain	-15– +15 dB	Gain of the low frequency range
High Gain	-15– +15 dB	Gain of the high frequency range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Level	0–127	Output level

52: 3D DELAY

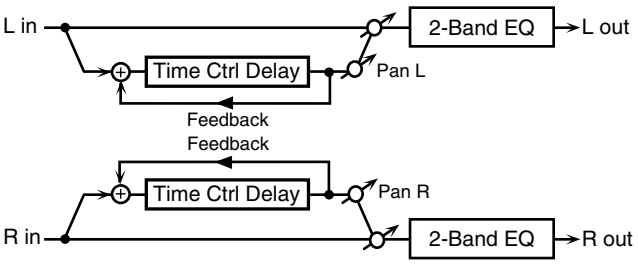
This applies a 3D effect to the delay sound. The delay sound will be positioned 90 degrees left and 90 degrees right.



Parameter	Value	Explanation
Delay Left Delay Right Delay Center	0–2600 ms, note	Adjusts the delay time from the direct sound until the delay sound is heard.
Center Feedback #	-98– +98 %	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
HF Damp	200–8000 Hz, BYPASS	Adjusts the frequency above which sound fed back to the effect will be cut. If you do not want to cut the high frequencies, set this parameter to BYPASS.
Left Level Right Level Center Level	0–127	Output level of the delay sound
Output Mode	SPEAKER, PHONES	Adjusts the method that will be used to hear the sound that is output to the OUTPUT jacks. The optimal 3D effect will be achieved if you select **SPEAKER** when using speakers, or **PHONES** when using headphones.
Low Gain	-15– +15 dB	Gain of the low range
High Gain	-15– +15 dB	Gain of the high range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Level	0–127	Output Level

53: TIME CTRL DELAY

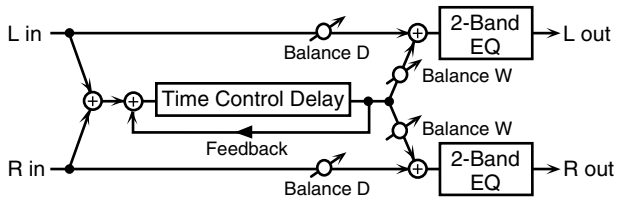
A stereo delay in which the delay time can be varied smoothly.



Parameter	Value	Explanation
Delay Time #	0–1300 ms, note	Adjusts the time until the delay is heard.
Acceleration	0–15	Adjusts the time over which the Delay Time changes from the current setting to a specified new setting. The rate of change for the Delay Time directly affects the rate of pitch change.
Feedback #	-98– +98 %	Adjusts the amount of the delay that's fed back into the effect. Negative (-) settings invert the phase.
HF Damp	200–8000 Hz, BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out. If you do not want to filter out any high frequencies, set this parameter to BYPASS.
Low Gain	-15– +15 dB	Gain of the low frequency range
High Gain	-15– +15 dB	Gain of the high frequency range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the delay sound (W)
Level	0–127	Output level

54: LONG TIME CTRL DELAY

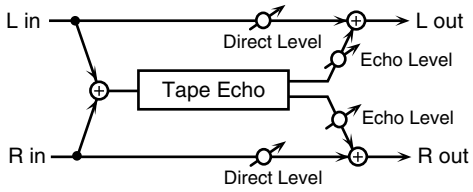
A delay in which the delay time can be varied smoothly, and allowing an extended delay to be produced.



Parameter	Value	Explanation
Delay Time #	0–2600 ms, note	Adjusts the time until the delay is heard.
Acceleration	0–15	Adjusts the time over which the Delay Time changes from the current setting to a specified new setting. The rate of change for the Delay Time directly affects the rate of pitch change.
Feedback #	-98– +98 %	Adjusts the amount of the delay that's fed back into the effect. Negative (-) settings invert the phase.
HF Damp	200–8000 Hz, BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out. If you do not want to filter out any high frequencies, set this parameter to BYPASS.
Pan #	L64–63R	Stereo location of the delay
Low Gain	-15– +15 dB	Gain of the low frequency range
High Gain	-15– +15 dB	Gain of the high frequency range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the delay sound (W)
Level	0–127	Output level

55: TAPE ECHO

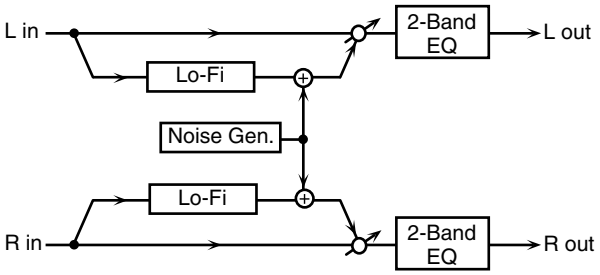
A virtual tape echo that produces a realistic tape delay sound. This simulates the tape echo section of a Roland RE-201 Space Echo.



Parameter	Value	Explanation
Mode	S, M, L, S+M, S+L, M+L, S+M+L	Combination of playback heads to use Select from three different heads with different delay times. **S:** short **M:** middle **L:** long
Repeat Rate #	0–127	Tape speed Increasing this value will shorten the spacing of the delayed sounds.
Intensity #	0–127	Amount of delay repeats
Bass	-15– +15 dB	Boost/cut for the lower range of the echo sound
Treble	-15– +15 dB	Boost/cut for the upper range of the echo sound
Head S Pan	L64–63R	Independent panning for the short, middle, and long playback heads
Head M Pan		
Head L Pan		
Tape Distortion	0–5	Amount of tape-dependent distortion to be added This simulates the slight tonal changes that can be detected by signal-analysis equipment. Increasing this value will increase the distortion.
Wow/Flutter Rate	0–127	Speed of wow/flutter (complex variation in pitch caused by tape wear and rotational irregularity)
Wow/Flutter Depth	0–127	Depth of wow/flutter
Echo Level #	0–127	Volume of the echo sound
Direct Level #	0–127	Volume of the original sound
Level	0–127	Output level

56: LOFI NOISE

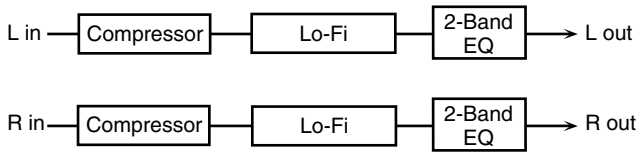
In addition to a Lo-Fi effect, this adds various types of noise such as white noise and disc noise.



Parameter	Value	Explanation
LoFi Type	1–9	Degrades the sound quality. The sound quality grows poorer as this value is increased.
Post Filter Type	OFF, LPF, HPF	Type of filter **OFF:** no filter is used **LPF:** cuts the frequency range above the Cutoff **HPF:** cuts the frequency range below the Cutoff
Post Filter Cutoff	200–8000 Hz	Center frequency of the filter
W/P Noise Type	WHITE, PINK	Switch between white noise and pink noise.
W/P Noise LPF	200–8000 Hz, BYPASS	Center frequency of the low pass filter applied to the white/pink noise (BYPASS: no cut)
W/P Noise Level #	0–127	Volume of the white/pink noise
Disc Noise Type	LP, EP, SP, RND	Type of record noise The frequency at which the noise is heard depends on the selected type.
Disc Noise LPF	200–8000 Hz, BYPASS	Adjusts the cutoff frequency of the low pass filter applied to the record noise. If you don't want to filter out any high frequencies, set this parameter to BYPASS.
Disc Noise Level #	0–127	Volume of the record noise
Hum Noise Type	50 Hz, 60 Hz	Frequency of the hum noise
Hum Noise LPF	200–8000 Hz, BYPASS	Center frequency of the low pass filter applied to the hum noise (BYPASS: no cut)
Hum Noise Level #	0–127	Volume of the hum noise
Low Gain	-15– +15 dB	Gain of the low range
High Gain	-15– +15 dB	Gain of the high range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Level	0–127	Output level

57: LOFI COMPRESS

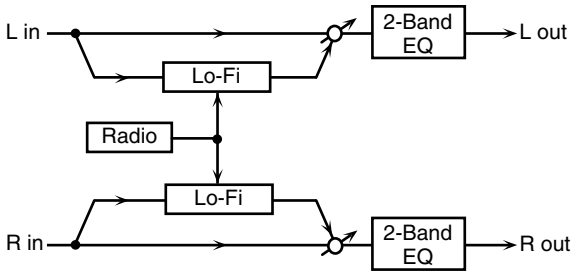
This is an effect that intentionally degrades the sound quality for creative purposes.



Parameter	Value	Explanation
Pre Filter Type	1–6	Selects the type of filter applied to the sound before it passes through the Lo-Fi effect.
LoFi Type	1–9	Degrades the sound quality. The sound quality grows poorer as this value is increased.
Post Filter Type	OFF, LPF, HPF	Type of filter **OFF:** no filter is used **LPF:** cuts the frequency range above the Cutoff **HPF:** cuts the frequency range below the Cutoff
Post Filter Cutoff	200–8000 Hz	Basic frequency of the Post Filter
Low Gain	-15– +15 dB	Gain of the low range
High Gain	-15– +15 dB	Gain of the high range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Level #	0–127	Output level

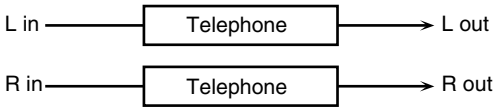
58: LOFI RADIO

In addition to a Lo-Fi effect, this effect also generates radio noise.



Parameter	Value	Explanation
LoFi Type	1–9	Degrades the sound quality. The sound quality grows poorer as this value is increased.
Post Filter Type	OFF, LPF, HPF	Type of filter **OFF:** no filter is used **LPF:** cuts the frequency range above the Cutoff **HPF:** cuts the frequency range below the Cutoff
Post Filter Cutoff	200–8000 Hz	Basic frequency of the Post Filter
Radio Detune #	0–127	Simulates the tuning noise of a radio. As this value is raised, the tuning drifts further.
Radio Noise Level #	0–127	Volume of the radio noise
Low Gain	-15– +15 dB	Gain of the low range
High Gain	-15– +15 dB	Gain of the high range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Level	0–127	Output level

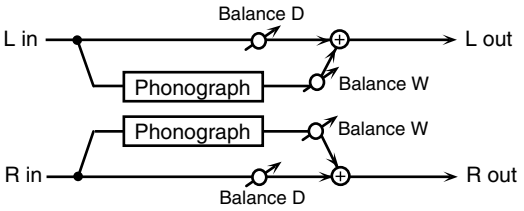
59: TELEPHONE



Parameter	Value	Explanation
Voice Quality #	0–15	Audio quality of the telephone voice
Treble	-15– +15 dB	Bandwidth of the telephone voice
Balance #	D100:0–D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Level	0–127	Output level

60: PHONOGRAPH

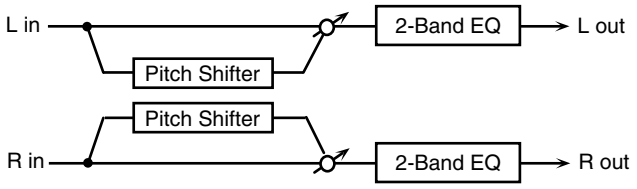
Simulates a sound recorded on an analog record and played back on a record player. This effect also simulates the various types of noise that are typical of a record, and even the rotational irregularities of an old turntable.



Parameter	Value	Explanation
Signal Distortion	0–127	Depth of distortion
Frequency Range	0–127	Frequency response of the playback system Decreasing this value will produce the impression of an old system with a poor frequency response.
Disc Type	LP, EP, SP	Rotational speed of the turntable This will affect the frequency of the scratch noise.
Scratch Noise Level	0–127	Amount of noise due to scratches on the record
Dust Noise Level	0–127	Volume of noise due to dust on the record
Hiss Noise Level	0–127	Volume of continuous "hiss"
Total Noise Level #	0–127	Volume of overall noise
Wow	0–127	Depth of long-cycle rotational irregularity
Flutter	0–127	Depth of short-cycle rotational irregularity
Random	0–127	Depth of indefinite-cycle rotational irregularity
Total Wow/Flutter #	0–127	Depth of overall rotational irregularity
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Level	0–127	Output level

61: PITCH SHIFTER (Feedback Pitch Shifter)

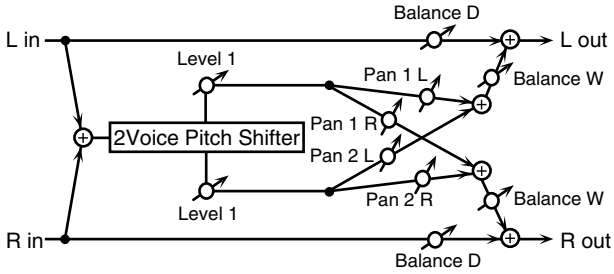
A stereo pitch shifter.



Parameter	Value	Explanation
Coarse #1	-24– +12 semi	Adjusts the pitch of the pitch shifted sound in semitone steps.
Fine #1	-100– +100 cent	Adjusts the pitch of the pitch shifted sound in 2-cent steps.
Delay Time	0–1300 ms, note	Adjusts the delay time from the direct sound until the pitch shifted sound is heard.
Feedback #	-98– +98 %	Adjusts the proportion of the pitch shifted sound that is fed back into the effect. Negative (-) settings will invert the phase.
Low Gain	-15– +15 dB	Gain of the low range
High Gain	-15– +15 dB	Gain of the high range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the pitch shifted sound (W)
Level	0–127	Output Level

62: 2VOICE PITCH SHIFTER

Shifts the pitch of the original sound. This 2-voice pitch shifter has two pitch shifters, and can add two pitch shifted sounds to the original sound.

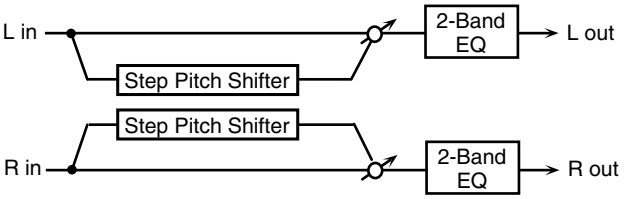


Parameter	Value	Explanation
Pitch 1: Coarse #1	-24-+12 semi	Adjusts the pitch of Pitch Shift 1 in semitone steps.
Pitch 1:Fine #1	-100-+100 cent	Adjusts the pitch of Pitch Shift Pitch 1 in 2-cent steps.
Pitch 1:Delay	0–1300 ms, note	Adjusts the delay time from the direct sound until the Pitch Shift 1 sound is heard.
Pitch 1:Feedback #	-98– +98 %	Adjusts the proportion of the pitch shifted sound that is fed back into the effect. Negative (-) settings will invert the phase.
Pitch 1:Pan #	L64-63R	Stereo location of the Pitch Shift 1 sound
Pitch 1:Level	0–127	Volume of the Pitch Shift1 sound
Pitch 2: Coarse #2	-24-+12 semi	Settings of the Pitch Shift 2 sound. The parameters are the same as for the Pitch Shift 1 sound.
Pitch 2:Fine #2	-100-+100 cent	
Pitch 2:Delay	0–1300 ms, note	
Pitch 2:Feedback #	-98– +98 %	
Pitch 2:Pan #	L64-63R	
Pitch 2:Level	0–127	

Parameter	Value	Explanation
Low Gain	-15– +15 dB	Gain of the low range
High Gain	-15– +15 dB	Gain of the high range
Level Balance	A100:0B-A0:100B	Volume balance between the Pitch Shift 1 and Pitch Shift 2 sounds
Balance	D100:0W-D0:100W	Volume balance between the direct sound (D) and the pitch shifted sound (W)
Level	0-127	Output Level

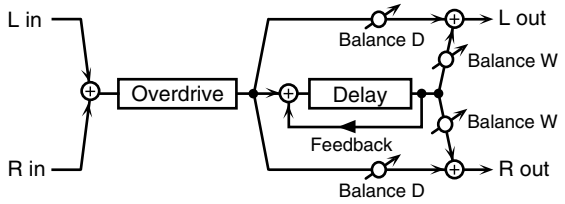
63: STEP PITCH SHIFTER

A pitch shifter in which the amount of pitch shift is varied by a 16-step sequence.



Parameter	Value	Explanation
Step 01–16	-24–+12 semi	Amount of pitch shift at each step (semitone units)
Rate #	0.05–10.00 Hz, note	Rate at which the 16-step sequence will cycle
Attack #	0–127	Speed at which the amount of pitch shift changes between steps
Gate Time #	0–127	Duration of the pitch shifted sound at each step
Fine	-100– +100 cent	Pitch shift adjustment for all steps (2-cent units)
Delay Time	0–1300 ms, note	Delay time from the original sound until the pitch-shifted sound is heard
Feedback #	-98– +98%	Proportion of the pitch-shifted sound that is to be returned to the input (negative values invert the phase)
Low Gain	-15– +15 dB	Amount of boost/cut for the low-frequency range
High Gain	-15– +15 dB	Amount of boost/cut for the high-frequency range
Balance #	D100:0W–D0:100W	Volume balance of the original sound (D) and pitch-shifted sound (W)
Level	0–127	Output volume

68: OVERDRIVE → DELAY

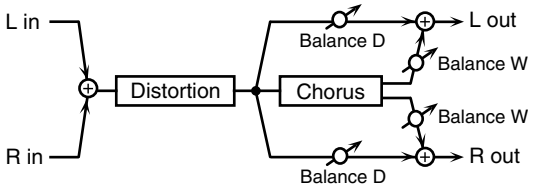


Parameter	Value	Explanation
Overdrive Drive #	0–127	Degree of distortion Also changes the volume.
Overdrive Pan #	L64–63R	Stereo location of the overdrive sound
Delay Time	0–2600 ms, note	Adjusts the delay time from the direct sound until the delay sound is heard.
Delay Feedback #	-98– +98 %	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
Delay HF Damp	200–8000 Hz, BYPASS	Adjusts the frequency above which sound fed back to the effect will be cut. If you do not want to cut the high frequencies, set this parameter to BYPASS.
Delay Balance #	D100:0W–D0:100W	Adjusts the volume balance between the sound that is sent through the delay (W) and the sound that is not sent through the delay (D).
Level	0–127	Output Level

69: DISTORTION → CHORUS

The parameters are essentially the same as in "66: OVERDRIVE → CHORUS," with the exception of the following two.

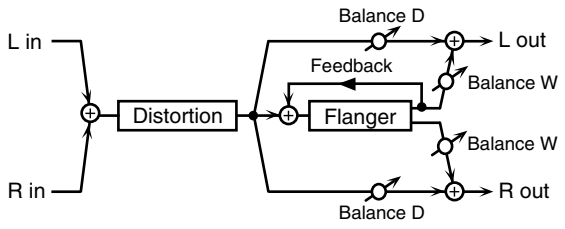
Overdrive Drive → Distortion Drive, Overdrive Pan → Distortion Pan



70: DISTORTION → FLANGER

The parameters are essentially the same as in "67: OVERDRIVE → FLANGER," with the exception of the following two.

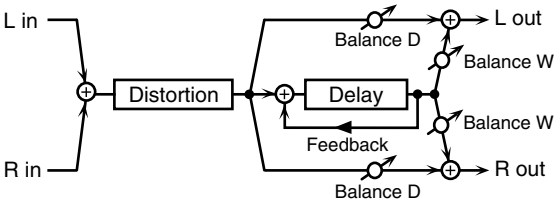
Overdrive Drive → Distortion Drive, Overdrive Pan → Distortion Pan



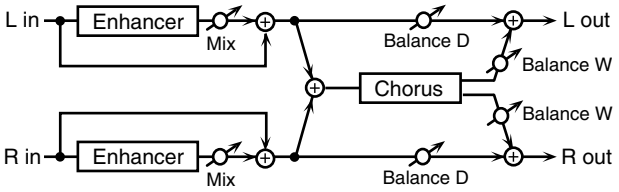
71: DISTORTION → DELAY

The parameters are essentially the same as in "68: OVERDRIVE → DELAY," with the exception of the following two.

Overdrive Drive → Distortion Drive, Overdrive Pan → Distortion Pan



72: ENHANCER → CHORUS

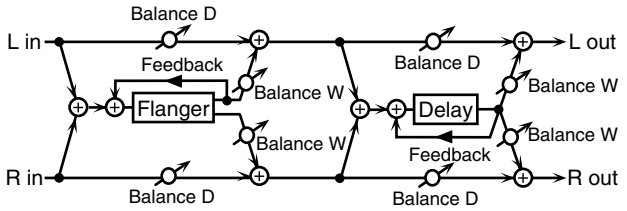


Parameter	Value	Explanation
Enhancer Sens #	0–127	Sensitivity of the enhancer
Enhancer Mix #	0–127	Level of the overtones generated by the enhancer
Chorus Pre Delay	0.0–100.0 ms	Adjusts the delay time from the direct sound until the chorus sound is heard.
Chorus Rate #	0.05–10.00 Hz, note	Frequency of modulation
Chorus Depth	0–127	Depth of modulation
Chorus Balance #	D100:0W–D0:100W	Adjusts the volume balance between the sound that is sent through the chorus (W) and the sound that is not sent through the chorus (D).
Level	0–127	Output Level

FLANGER

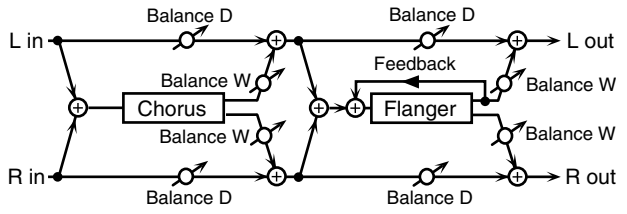
75: CHORUS → DELAY

76: FLANGER → DELAY



Parameter	Value	Explanation
Flanger Pre Delay	0.0–100.0 ms	Adjusts the delay time from when the direct sound begins until the flanger sound is heard.
Flanger Rate #	0.05–10.00 Hz, note	Frequency of modulation
Flanger Depth	0–127	Depth of modulation
Flanger Feedback #	-98– +98 %	Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.
Flanger Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the flanger sound (W)
Delay Time	0–2600 ms, note	Adjusts the delay time from the direct sound until the delay sound is heard.
Delay Feedback #	-98– +98 %	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
Delay HF Damp	200–8000 Hz, BYPASS	Adjusts the frequency above which sound fed back to the effect will be cut. If you do not want to cut the high frequencies, set this parameter to BYPASS.
Delay Balance #	D100:0W–D0:100W	Adjusts the volume balance between the sound that is sent through the delay (W) and the sound that is not sent through the delay (D).
Level	0–127	Output Level

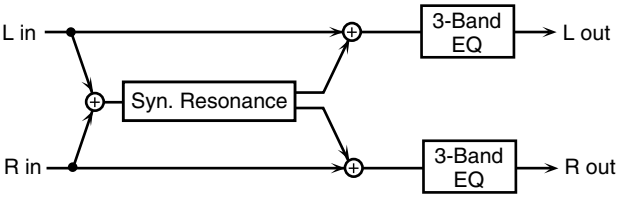
77: CHORUS → FLANGER



Parameter	Value	Explanation
Chorus Pre Delay	0.0–100.0 ms	Adjusts the delay time from the direct sound until the chorus sound is heard.
Chorus Rate #	0.05–10.00 Hz, note	Modulation frequency of the chorus effect
Chorus Depth	0–127	Modulation depth of the chorus effect
Chorus Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the chorus sound (W)
Flanger Pre Delay	0.0–100.0 ms	Adjusts the delay time from when the direct sound begins until the flanger sound is heard.
Flanger Rate #	0.05–10.00 Hz, note	Modulation frequency of the flanger effect
Flanger Depth	0–127	Modulation depth of the flanger effect
Flanger Feedback #	-98– +98 %	Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.
Flanger Balance #	D100:0W–D0:100W	Adjusts the volume balance between the sound that is sent through the flanger (W) and the sound that is not sent through the flanger (D).
Level	0–127	Output Level

78: SYMPATHETIC RESONANCE

On an acoustic piano, holding down the damper pedal allows other strings to resonate in sympathy with the notes you play, creating rich and spacious resonances. This effect simulates these sympathetic resonances.



Parameter	Value	Explanation
Depth #	0–127	Depth of the effect
Damper #	0–127	Depth to which the damper pedal is pressed (controls the resonant sound)
Pre LPF	16–15000 Hz, BYPASS	Frequency of the filter that cuts the high-frequency content of the input sound (BYPASS: no cut)
Pre HPF	BYPASS, 16–15000 Hz	Frequency of the filter that cuts the low-frequency content of the input sound (BYPASS: no cut)
Peaking Freq	200–8000 Hz	Frequency of the filter that boosts/cuts a specific frequency region of the input sound
Peaking Gain	-15– +15 dB	Amount of boost/cut produced by the filter at the specified frequency region of the input sound
Peaking Q	0.5, 1.0, 2.0, 4.0, 8.0	Width of the frequency region boosted/cut by the 'Peaking Gain' parameter (larger values make the region narrower)
HF Damp	16–15000 Hz, BYPASS	Frequency at which the high-frequency content of the resonant sound will be cut (BYPASS: no cut)
LF Damp	BYPASS, 16–15000 Hz	Frequency at which the low-frequency content of the resonant sound will be cut (BYPASS: no cut)
Lid	1–6	This simulates the actual changes in sound that occur when the lid of a grand piano is set at different heights.
EQ Low Freq	200, 400 Hz	Frequency of the low-range EQ
EQ Low Gain	-15– +15 dB	Amount of low-range boost/cut
EQ Mid Freq	200–8000 Hz	Frequency of the midrange EQ
EQ Mid Gain	-15– +15 dB	Amount of midrange boost/cut
EQ Mid Q	0.5, 1.0, 2.0, 4.0, 8.0	Width of midrange (larger values make the region narrower)
EQ High Freq	2000, 4000, 8000 Hz	Frequency of the high-range EQ
EQ High Gain	-15–+15 dB	Amount of high-range boost/cut
Level	0–127	Output Level

When Using 3D Effects

The following 3D effects utilize RSS (Roland Sound Space) technology to create a spaciousness that cannot be produced by delay, reverb, chorus, etc.

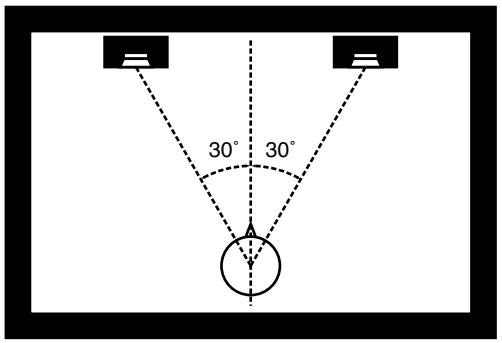
52: 3D DELAY

29: 3D CHORUS

30: 3D FLANGER

31: 3D STEP FLANGER

When using these effects, we recommend that you place your speakers as follows. Also, make sure that the speakers are at a sufficient distance from the walls on either side.



If the left and right speakers are too far apart, or if there is too much reverberation, the full 3D effect may not appear.

Each of these effects has an "Output Mode" parameter. If the sound from the OUTPUT jacks is to be heard through speakers, set this parameter to "SPEAKER." If the sound is to be heard through headphones, set it to "PHONES." This will ensure that the optimal 3D effect will be heard. If this parameter is not set correctly, the full 3D effect may not appear.

About the STEP RESET function

06: STEP FILTER

16: STEP RING MODULATOR

19: STEP PAN

20: SLICER

63: STEP PITCH SHIFTER

The above five types contain a sixteen-step sequencer.

For these types, you can use a multi-effect control to reset the sequence to play from the first step.

To do this, set the multi-effect control Destination to "Step Reset."

For example if you are using the modulation lever to control the effect, you would make the following settings.

Source: CC01: MODULATION

Destination: Step Reset

Sens: +63

With these settings, the sequence will play back from the first step whenever you operate the modulation lever.

note:

(Sixty-fourth-note triplet), (Sixty-fourth note), (Thirty-second-note triplet),

(Thirty-second note), (Sixteenth-note triplet), (Dotted thirty-second note),

(Sixteenth note), (Eighth-note triplet), (Dotted sixteenth note),

(Eighth note), (Quarter-note triplet), (Dotted eighth note),

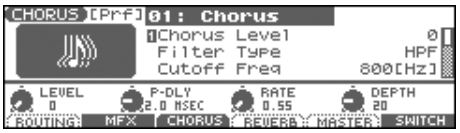
(Quarter note), (Half-note triplet), (Dotted quarter note), (Half note),

(Whole-note triplet), (Dotted half note), (Whole note),

(Double-note triplet), (Dotted whole note), (Double note)

Making Chorus Settings

* *The Fantom-Xa's Chorus effect unit can also be used as a stereo delay unit.*



cf.

For details on these settings, refer to **Making Effect Settings** (p. 157).

Parameter	Value	Explanation
(Chorus Type)	00 (OFF)–03	Selects either chorus or delay.
Chorus Level	0–127	Volume of the sound passed through chorus
Type 01: Chorus		
Filter Type	OFF, LPF, HPF	Type of filter **OFF:** no filter is used **LPF:** cuts the frequency range above the Cutoff Freq **HPF:** cuts the frequency range below the Cutoff Freq
Cutoff Freq	200–8000 Hz	Basic frequency of the filter
Pre Delay	0.0–100.0 ms	Delay time from the direct sound until the chorus sound is heard
Rate	0.05–10.00 Hz, note	Frequency of modulation
Depth	0–127	Depth of modulation
Phase	0–180°	Spatial spread of the sound
Feedback	0–127	Amount of the chorus sound fed back into the effect
Type 02: Delay		
Dly Left Dly Right Dly Center	0–1000 ms, note	Delay time from the direct sound until the delay sound is heard
Center Feedback	-98–+98 %	Proportion of the delay sound fed back into the effect Negative (-) settings will invert the phase.
HF Damp	200–8000 Hz, BYPASS	Frequency above which sound fed back to the effect will be cut If you do not want to cut the high frequencies, set this parameter to BYPASS.
Left Level Right Level Center Level	0–127	Volume of each delay sound
Type 03: GM2 Chorus		
Pre-LPF	0–7	Cuts the high frequency range of the sound coming into the chorus. Higher values will cut more of the high frequencies.
Level	0–127	Volume of the chorus sound
Feedback	0–127	Amount of the chorus sound fed back into the effect
Delay	0–127	Delay time from the direct sound until the chorus sound is heard
Rate	0–127	Frequency of modulation
Depth	0–127	Depth of modulation
Send Level To Reverb	0–127	Amount of chorus sound that will be sent to the reverb

note:

(Sixty-fourth-note triplet), (Sixty-fourth note), (Thirty-second-note triplet),

(Thirty-second note), (Sixteenth-note triplet), (Dotted thirty-second note),

(Sixteenth note), (Eighth-note triplet), (Dotted sixteenth note),

(Eighth note), (Quarter-note triplet), (Dotted eighth note),

(Quarter note), (Half-note triplet), (Dotted quarter note), (Half note),

(Whole-note triplet), (Dotted half note), (Whole note),

(Double-note triplet), (Dotted whole note), (Double note)

Making Reverb Settings

cf.

For details on these settings, refer to **Making Effect Settings** (p. 157).

Parameter	Value	Explanation
(Reverb Type)	00 (OFF)–05	Type of Reverb
Reverb Level	0–127	
Type 01: Reverb (Normal Reverb)		
Type	ROOM1, ROOM2, STAGE1, STAGE2, HALL1, HALL2, DELAY, PAN-DELAY	Type of reverb/delay **ROOM1:** short reverb with high density **ROOM2:** short reverb with low density **STAGE1:** reverb with greater late reverberation **STAGE2:** reverb with strong early reflections **HALL1:** very clear-sounding reverb **HALL2:** rich reverb **DELAY:** conventional delay effect **PAN-DELAY:** delay effect with echoes that pan left and right
Time	0–127	Time length of reverberation (Type: ROOM1–HALL2) Delay time (Type: DELAY, PAN-DELAY)
HF Damp	200–8000 Hz, BYPASS	Frequency above which the high-frequency content of the reverb sound will be cut or "damped" If you do not want to cut the high frequencies, set this parameter to BYPASS.
Delay Feedback	0–127	Amount of delay feedback when the Type setting is DELAY or PAN-DELAY
Type 02: SRV Room (Simulates typical room acoustic reflections.) **Type 03: SRV Hall** (Simulates typical concert hall acoustic reflections.) **Type 04: SRV Plate** (Simulates a reverb plate, a popular type of artificial reverb unit that derives its sound from the vibration of a metallic plate.)		
Pre Delay	0.0–100.0 ms	Delay time from the direct sound until the reverb sound is heard
Time	0–127	Time length of reverberation
Size	1–8	Size of the simulated room or hall
High Cut	160 Hz–12.5 kHz, BYPASS	Frequency above which the high-frequency content of the reverb will be reduced If you do not want to reduce the high frequencies, set this parameter to BYPASS.
Density	0–127	Density of reverb
Diffusion	0–127	Change in the density of the reverb over time The higher the value, the more the density increases with time. (The effect of this setting is most pronounced with long reverb times.)
LF Damp	50–4000 Hz	Frequency below which the low-frequency content of the reverb sound will be reduced or "damped"
LF Damp Gain	-36–0 dB	Amount of damping applied to the frequency range selected with LF Damp With a setting of "0," there will be no reduction of the reverb's low-frequency content.
HF Damp	4000 Hz–12.5 kHz	Frequency above which the high-frequency content of the reverb sound will be reduced or "damped"
HF Damp Gain	-36–0 dB	Amount of damping applied to the frequency range selected with HF Damp With a setting of "0," there will be no reduction of the reverb's high-frequency content.
Type 05: GM2 Reverb		
Character	0–7	Type of reverb **0–5:** reverb **6, 7:** delay
Pre-LPF	0–7	Cuts the high frequency range of the sound coming into the reverb. Higher values will cut more of the high frequencies.
Level	0–127	Output level of reverberation
Time	0–127	Time length of reverberation
Delay Feedback	0–127	Amount of the delay sound fed back into the effect when the Reverb Character setting is 6 or 7

This is a stereo compressor (limiter) that is applied to the final output of the Fantom-Xa. It has independent high, mid, and low ranges.

Settings Common to All Modes (System Function)

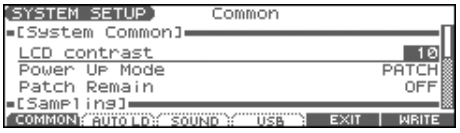
Settings that affect the entire operating environment of the Fantom-Xa, such as tuning and MIDI message reception, are referred to as **system functions**. This section explains how to make settings for the System functions and describes the functions of the different System parameters.

How to Make System Function Settings

1. **From the PATCH PLAY, PERFORM LAYER, or PERFORM MIXER screen, press [MENU].**

2. **Press ▲ ▼ to select "1. System," and then press [ENTER].**
   The System Menu window appears.

3. **Press [F1]–[F5] to select the parameter group.**
   A SYSTEM SETUP screen appears.



4. **Press [F1]–[F4] or ▲ ▼ to select the parameter you wish to change.**

5. **Use the VALUE dial or [INC] [DEC] to change the setting.**

6. **Repeat steps 3–5 to set each system parameter you want to change.**

7. **To save the settings you changed, press [F6 (WRITE)].**

8. **Press [EXIT] to return to the previous screen.**

Saving the System Settings (System Write)

Changes you make to the System function settings are only temporary—they will be discarded as soon as the power is turned off. If you want to keep any changes you've made in the system settings, you must save them in internal system memory.

NOTE

When you perform the save procedure, the data that previously occupied the save destination will be lost. However, the factory setting data can be recovered by performing the Factory Reset procedure.

1. **Change the system function settings, and press [F6 (WRITE)].**

The display will indicate "System Write Completed!" The data will be saved, and you're returned to the SYSTEM SETUP screen.

System Information

1. **Press [MENU].**

2. **Press ▲ ▼ to select "1. System," and then press [ENTER].**
   The System Menu window appears.

3. **Press [F6 (INFORMATION)].**
   The SYSTEM INFO screen appears.

4. **Press [F1]–[F3] to display the information you wish to see.**
   [F1 (MEMORY)]: Amount of memory installed
   [F2 (SRX)]: Name of the wave expansion board that is installed
   [F3 (VERSION)]: Version of the Fantom-Xa's system program

5. **Press [EXIT] to return to the previous screen.**

Functions of System Parameters

This section explains what the different System parameters do, and also how these parameters are organized.

System Menu [F1 (GENERAL)]

[F1 (COMMON)]

Parameter	Value	Explanation
System Common		
LCD Contrast	1–20	Adjusts the contrast of the display.
Power Up Mode	PATCH, PERFORMANCE	Mode that the Fantom-Xa will be in when it is powered up. **PATCH:** Patch mode **PERFORMANCE:** Performance mode
Patch Remain	OFF, ON	Specifies whether currently sounding notes will continue sounding when another patch or rhythm set is selected (ON), or not (OFF). Also, when this is "ON," changes produced by incoming MIDI messages such as Volume or Pan (CC 5, 7, 10, 65, 68, 71–74, RPN 0, 1, 2, MONO ON, POLY ON), as well as tonal quality and volume changes produced by the various controllers will be inherited. * *Effects settings change as soon as you switch to a new patch or rhythm set, without being influenced by the Patch Remain setting. Because of this, certain effects settings can cause notes that were until then sounding to no longer be heard, even though Patch Remain has been set to "ON."*
Sampling		
Default File Type	WAV, AIFF	File format used when saving a sample
Pre Sample Time	0–1000 ms	The length of sound preceding the moment at which sampling was manually or automatically initiated that will be captured in the sample. This lets you prevent the attack portion of the sound from being omitted from the sample.
Trigger Level	0–7	Volume level at which sampling will begin when Auto Trig is "ON" A setting of "0" is the minimum.
Gap Time	500–2000 ms	Length of silence at which the sample will be divided Whenever there is a silent region longer than the specified time, the sample will be divided at that point, and the next sample number will be assigned to the sound that follows. * *This parameter is valid only when you are using Auto Divide Sampling.*
Input Select	LINE IN L/R, LINE IN L, MICROPHONE	Input source of the external input sound **LINE IN L/R:** L/R (stereo) **LINE IN L:** L (mono) **MICROPHONE:** L (mono, mic level)
Trimming Switch	OFF, ON	If this is turned "ON," the Start point and End point settings will be automatically adjusted after sampling is performed, so any silent portions at the beginning or end of the sampled sound are excluded.
Skip Back Time	OFF, 5–40 sec	Specifies how much earlier in time that you want sampling to take place when you use Skip Back Sampling. If "OFF" selected, skip-back sampling cannot be performed.

[F2 (AUTO LD)]

Parameter	Value	Explanation
Load Preset Samples at Startup	OFF, ON	Specifies whether the preset samples will be loaded into memory at power-on (ON) or not (OFF).
Load User Samples at Startup	OFF, ON	Specifies whether the samples of the user area and memory card will be loaded into memory at power-on (ON) or not (OFF).
Load Demo Song at Startup	OFF, ON	Specifies whether the demo song will be loaded into the temporary area at power-on (ON), or not (OFF).

3 (SOUND)]

ameter	Value	Explanation
und Generator		
ter Tune	415.3–466.2 Hz	Overall tuning of the Fan The display shows the y of te (center A).
er Key Shift	-24– +24	Shifts the overall pitch o om-X tone steps.
er Level	0–127	Volume of the entire Fa
ut Gain	-12– 12 dB	Output gain from the F 's Ou When, for example, relative ices being sounded, boosting the output gain can let you attain th itable l for recording and other purposes.
arallel	MIX, PARALLEL	How the sound of the ntom-X utput **MIX:** Set this to ha ective ou l sounds output from the OUTPUT A (MIX) jacks. When you w ck the fi l sound being output, set to MIX. **PARALLEL:** Out ding to ea Assign settings. * *Sounds which are spective O gn to be output from the INDIVIDUAL 3 output from the le T A (MIX) s which are set to be output from the I AL 4 jack are out e right OUT IX) jack.* * *Sounds output f ONES jack a e as those output from the OUT jacks. Therefore s set with Ou n to be output from the OUT not output from th jack. Be sure t sound you want to hear t adphones set to "MIX."*
ode	SINGLE, CHORD, PHRASE	**SINGLE:** The ified by Preview Number will sively one by one. **CHORD:** The ified by Preview Number w ultaneously. **PHRASE:** Th ssociated with th type/cat ed.
Note	C - –G9	Specify the p e four notes that w when Mode is set to "SINGLE" or "CHORD * *If "PHR ected for the Preview M ettings will have no effect.*
elocity	OFF, 1–127	Specify th of the four notes that w Preview Mode is set to "SINGLE" or "CHO * *If "PH Selected for the Preview M , these settings will have no effect.*
S Patch Mode Th lows you to play the keyboard using ments other than eq t. The pitch is specified in one-cent units rel al tempered pitch. * *C th of a semitone.* C une settings can be created in P . In Performa is for each part of the performance (p. 76). * *In is valid only for the keyboard par* • Th pplies to MIDI messages re m an exte vice.		
Scale	OFF, ON	on whe use a tunin her than equal temperament.
Patch C–B	-64– +63	le tu Patch mode.

[F4 (U

Parameter		
USB Mode		B connector will be used. . Select this if you want to transfer files. ct this if you want to exchange MIDI messages with a sequencer or oth- *on switching the USB mode, refer to* ***Switching the USB Storage Mode and the MIDI Mode*** *(p. 206)*
USB-MIDI Th		When USB Mode is set to "MIDI," this switch specifies whether MIDI messages received at the MIDI connector will be retransmitted from the MIDI OUT connector (ON) or not (OFF).

ode before you connect the Fantom-Xa to your computer via the USB cable. If you change this setting while the e computer may fail to recognize it correctly.

ur computer in each USB Mode, refer to **Connections** (p. 207).

System Menu [F2 (KBD/CTRL)]

[F1 (KBD)]

Parameter	Value	Explanation
Keyboard Velocity	REAL, 1–127	Velocity value that will be transmitted when you play the keyboard **REAL:** Actual keyboard velocity will be transmitted. **1–127:** A fixed velocity value will be transmitted regardless of how you play.
Touch Sens	LIGHT, MEDIUM, HEAVY	Keyboard's touch **LIGHT:** Light weight synthesizer keyboard like **MEDIUM:** Standard **HEAVY:** Acoustic piano simulation

[F2 (PDL BND)]

Parameter	Value	Explanation
Pedal		
Control Pedal Assign	CC01–31, 33–95, BEND UP, BEND DOWN, AFTERTOUCH, OCT UP, OCT DOWN, START/STOP, PUNCH IN/OUT, TAP TEMPO, PROG UP, PROG DOWN, FAVORITE UP, FAVORITE DOWN, ARP SW, RHY START/STOP, CHORD SW, LOOP	Function of the pedal connected to the PEDAL CONTROL jacks **CC01–31, 33–95:** Controller numbers 1-31, 33-95 **BEND UP:** The pitch will rise in semitone steps (maximum 4 octaves) each time you press the pedal. **BEND DOWN:** The pitch will fall in semitone steps (maximum 4 octaves) each time you press the pedal. **AFTERTOUCH:** Aftertouch **OCT UP:** Each pedal press raises the key range in octave steps (up to 3 octaves higher). **OCT DOWN:** Each pedal press lowers the key range in octave steps (up to 3 octaves lower). **START/STOP:** The sequencer will start/stop. **PUNCH IN/OUT:** Manual punch-in/out recording will start/stop. **TAP TEMPO:** Tap tempo (a tempo specified by the interval at which you press the pedal). **PROG UP:** The next sound number will be selected. **PROG DOWN:** The previous sound number will be selected. **FAVORITE UP:** The favorite patch/performance of the next number or bank will be selected. **FAVORITE DOWN:** The favorite patch/performance of the previous number or bank will be selected. **ARP SW:** Arpeggio/Rhythm function on/off **RHY START/STOP:** Rhythm pattern playback on/off **CHORD SW:** Chord memory function on/off **LOOP:** Loop play on/off
Control Pedal Polarity	STANDARD, REVERSE	Selects the polarity of the pedal. On some pedals, the electrical signal output by the pedal when it is pressed or released is the opposite of other pedals. If your pedal has an effect opposite of what you expect, set this parameter to "REVERSE." If you are using a Roland pedal (that has no polarity switch), set this parameter to "STANDARD."
Hold Pedal Polarity	STANDARD, REVERSE	
Continuous Hold Pedal	OFF, ON	Determines whether the HOLD PEDAL jack will provide support for half-pedaling (ON), or not (OFF). When this is set to support use of half-pedaling techniques, you can then connect an optional expression pedal (DP-8, etc.), and employ pedal work to achieve even finer control in performances in which piano tones are used.
Pitch Bend		
Bender and Modulation Part Select	KBD, PAD	Part controlled by the Pitch Bend/Modulation lever

[F3 (KNOB SW)]

Parameter	Value	Explanation
Realtime CTRL Knob		
Knob Part Select	KBD, PAD	Part controlled by the realtime control knobs
Knob C1 Assign Knob C2 Assign Knob C3 Assign Knob C4 Assign	CC01–31, 33–95, PITCH BEND, AFTERTOUCH, ARP STYLE, ARP GRID, ARP DURATION, ARP MOTIF, CHORD FORM, MASTER LEVEL	Functions that will be controlled by the REALTIME CONTROL knobs **CC01–31, 33–95:** Controller numbers 1–31, 33–95 **PITICH BEND:** Pitch Bend **AFTERTOUCH:** Aftertouch **ARP STYLE:** Arpeggio Style **ARP GRID:** Arpeggio Grid **ARP DURATION:** Duration of each arpeggiated note **ARP MOTIF:** Arpeggio Motif **CHORD FORM:** Chord form of the Chord Memory function **MASTER LEVEL:** The volume of the entire Fantom-Xa
Realtime CTRL Assign SW		
Switch 1 Assign Switch 2 Assign	TRANSPOSE DOWN, TRANSPOSE UP, TAP TEMPO, MONO/POLY, PORTAMENTO, HOLD, MFX1–3, CHORUS SW, REVERB SW, MASTERING SW, LOOP, RHY START/STOP	Functions that will be controlled by the [1]/[2] buttons **TRANSPOSE DOWN:** Lowers the key range in semitones (up to 5 semitones lower). **TRANSPOSE UP:** Raises the key range in semitones (up to 6 semitones higher). **TAP TEMPO:** Tap tempo (a tempo specified by the interval at which you press the button) **MONO/POLY:** Pressed to toggle between polyphonic (POLY) and monophonic (MONO) play of a patch. **PORTAMENTO:** Portamento On/Off **HOLD:** Hold play On/Off **MFX1–3 SW:** Multi-effect 1–3 switch **CHORUS SW:** Chorus switch **REVERB SW:** Reverb switch **MASTERING SW:** Mastering switch **LOOP:** Loop play On/Off **RHY START/STOP:** Rhythm pattern playback On/Off

[F4 (CTRL)]

Parameter	Value	Explanation
Sys Ctrl 1–4 Source	OFF, CC01–95, PITCH BEND, AFTERTOUCH	Selects the MIDI message used as the System Control. **OFF:** The system control knob will not be used. **CC01–95:** Controller numbers 1–95 **PITCH BEND:** Pitch Bend **AFTERTOUCH:** Aftertouch

System Control

This function, which departs from previously used methods, and instead allows you to use MIDI messages to change tone settings in realtime, is called the **Matrix Control** (p. 49). Similarly, the function allowing you to use MIDI messages to change multi-effects settings in realtime is called the **Multi-effects Control** (p. 162).

Normally, the Matrix Control is used for making patch settings, and the Multi-effects Control for making settings to patches, rhythm sets, and performances.

However, if you do not need to change the MIDI messages used for matrix control or multi-effects control by each patch/rhythm set/performance, or if you want to use a specific MIDI message for matrix control or multi-effects control, you will want to make use of **System Control**. In other words, you could call the System Controls global Matrix Control/Multi-effects Control for the entire Fantom-Xa.

You can use up to four System Controls.

System Menu [F3 (MIDI)]

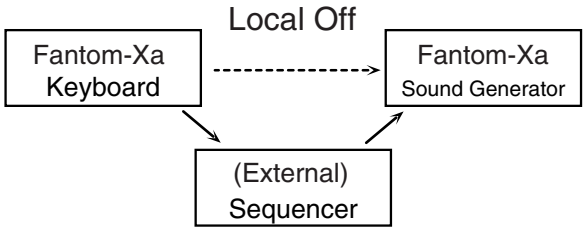
[F1 (GENERL)]

Parameter	Value	Explanation
Local Switch	OFF, ON	Determines whether the internal sound generator is disconnected (OFF) from the controller section (keyboard, Pad, pitch bend/modulation lever, knobs, buttons, D Beam controller, pedal, and so on); or not disconnected (ON). Normally this is left "ON," but if you wish to use the Fantom-Xa's keyboard and controllers to control only external sound modules, set it to "OFF."
Device ID	17–32	When you want to transmit or receive System Exclusive messages, set this parameter to match the Device ID number of the other MIDI device.
Remote Keyboard Switch	OFF, ON	Set this parameter "ON" when you want to use an external MIDI keyboard instead of the Fantom-Xa's keyboard. In this case, the MIDI transmit channel of the external MIDI keyboard can be set to any channel. Normally you will leave this parameter "OFF." * *Turn this "ON" when you want to control the Fantom-Xa from an external MIDI device when performing with the Arpeggio or RPS function.*
Performance Control Channel	1–16, OFF	Selects the MIDI receive channel used during switching of performances when MIDI messages (Program Change/Bank Select) are sent from an external MIDI device. Set this to "OFF" if performances are not to be switched from an external MIDI device. * *If only a program change is received, and if this parameter setting coincides with the MIDI receive channel of a part, priority will be given to switching the performance.*
Kbd Patch Rx/Tx Channel	1–16	Channel used to transmit and receive MIDI messages for the Keyboard part in Patch mode
Pad Patch Rx/Tx Channel	1–16	Channel used to transmit and receive MIDI messages for the Pad part in Patch mode

Using the Local Switch

When you're using the Fantom-Xa with external sequencer software, leave the Local Switch turned off. Read the following for details.

Connecting the Fantom-Xa to an external sequencer



Typically, things are hooked up so the data travels as follows: the Fantom-Xa's keyboard → your external sequencer software → the Fantom-Xa's sound generator. Normally, the Fantom-Xa's keyboard section is internally connected to its sound generator section; this internal connection is controlled by the Local Switch. If you turn the Local Switch off, the Fantom-Xa's keyboard and sound generator sections will be independent, allowing you to use the connection described above with your external sequencer software.

[F2 (TX)]

Parameter	Value	Explanation
Transmit Program Change	OFF, ON	Specifies whether Program Change messages will be transmitted (ON) or not (OFF).
Transmit Bank Select	OFF, ON	Specifies whether Bank Select messages will be transmitted (ON) or not (OFF).
Transmit Active Sensing	OFF, ON	Specifies whether Active Sensing messages will be transmitted (ON) or not (OFF).
Transmit Edit Data	OFF, ON	Specify whether changes you make in the settings of a patch, performance will be transmitted as system exclusive messages (ON), or will not be transmitted (OFF).
Soft Through	OFF, ON	Thru function re-transmits all messages received at the MIDI IN connector to the MIDI OUT connector without modifying them in any way.

[F3 (RX)]

Parameter	Value	Explanation
Receive Program Change	OFF, ON	Specifies whether Program Change messages will be received (ON) or not (OFF).
Receive Bank Select	OFF, ON	Specifies whether Bank Select messages will be received (ON) or not (OFF).
Receive Exclusive	OFF, ON	Specifies whether System Exclusive messages will be received (ON) or not (OFF).
Receive GM System On	OFF, ON	Specifies whether General MIDI System On messages will be received (ON) or not (OFF).
Receive GM2 System On	OFF, ON	Specifies whether General MIDI 2 System On messages will be received (ON) or not (OFF).
Receive GS Reset	OFF, ON	Specifies whether GS Reset messages will be received (ON) or not (OFF).

[F4 (MMC MTC)]

Parameter	Value	Explanation
MMC MMC (MIDI Machine Control) is a specification that allows MIDI messages to be used to control devices such as tape recorders, VTR's, and digital recording systems. Thirty-seven MMC commands are available, including Stop and Play.		
MMC Mode	MASTER, SLAVE	When synchronizing the Fantom-Xa with a hard disk recorder, such as one from the Roland VS series, specify which synchronization signal the Fantom-Xa's sequencer will use for operation. **MASTER:** The Fantom-Xa will be the master. Use this setting when you want other devices to follow the operation of the Fantom-Xa. **SLAVE:** The Fantom-Xa will be the slave. Use this setting when you want the Fantom-Xa to receive MMC (MIDI Machine Control) from an external device and operate accordingly.
MMC Output	OFF, ON	Turn this "ON" if you want to synchronize with a hard disk recorder, such as one from the Roland VS series. When set "ON," MMC (MIDI Machine Control) related commands (Play, Stop and Locate) will be transmitted.
	OFF, ON	Set this parameter "ON" when you want MTC (MIDI Time Code) to be transmitted to an exter-

Parameter	Value	Explanation
MTC Offset Time Frame	0–29 (frames)	Coordinates the playback timing of the Fantom-Xa and the external device in a frame units.
MTC Error Level	0–10	Determines how often the reception status is checked when MTC is being received from an external device. Stop synchronization if a problem becomes apparent with the check. The checking interval will be longer for larger values. In strict terms, the lower the numerical value set, the more accurate the check is. However, playback may be stopped overly frequently if too rigorous a check is made, and this soon becomes inconvenient. By raising the Error Level setting, then even if problems with the reception of MTC do occur, synchronization can then continue as long as such problems remain at a level that does not cause undue problems.

MIDI Clock and MTC

MIDI Clock and MTC (MIDI Time Code) are both messages used for synchronization. Select either of them depending on the application.

MIDI Clock transmits and synchronizes operations to a sequencer's performance tempo, whereas MTC synchronizes operations between devices based on an absolute time. Since Roland VS Series workstations are hard disk recorders, they cannot send MIDI Clock. Therefore, using a MTC is convenient for synchronization of the hard disk recorder and the Fantom-Xa. However, VS Series devices also feature specialized tracks for recording MIDI Clock, so with the Fantom-Xa's MIDI Clock recorded in this manner, we have another synchronizing technique in which the VS device appears to be sending MIDI Clock (although it is actually playing back tracks to which MIDI Clock has been recorded). However, since the tempo must be recorded to the VS sync track beforehand, MTC is only convenient in synchronizing with songs that do not contain great amounts of tempo data.

Types of MTC

The types of MTC that can be selected by the Fantom-Xa are shown below. Select the same frame rate as that set for the external device. When not using a video device, then any frame rate may be selected as long as the rates are the same on both devices being synchronized.

30: This is 30 frames per second, non-drop format. This is used by audio devices such as analog tape recorders, and for NTSC format black and white video (used in Japan and the U.S.).

29N: This is 29.97 frames per second, non-drop format. This is used for NTSC format color video (used in Japan and the U.S.).

29D: 29.97 frames per second drop format. This is used for NTSC format color video (used in Japan and the U.S.).

25: 25 frame per second frame rate. This is used for SECAM or PAL format video, audio equipment, and film (used in Europe and elsewhere).

24: 24 frame per second frame rate. This is used for video, audio devices, and film in the US.

Non-Drop Format and Drop Format

There are two types of format used by NTSC video cassette recorders, non-drop and drop. Non-drop format features continuous time code, whereas in drop format, which is used for NTSC color video format, the first two frames of every minute are dropped, except for those at ten-minute intervals. In most video and audio production, since formats with continuous frames are easier to deal with, non-drop is generally used. In contrast, in situations such as in broadcast, where the time code must match actual clock time, drop is used.

System Menu [F4 (SEQ/TEMPO)]

[F1 (METRO)]

Parameter	Value	Explanation
Metronome Mode	OFF, PLAY-ONLY, REC-ONLY, PLAY&REC, ALWAYS	Specifies when you want the metronome to sound. * *If a check mark (✔) is added by pressing [F5 (CLICK)] in the Tempo window which appears when you press [TEMPO], the metronome will always sound.* **OFF:** Will not sound. **PLAY-ONLY:** Will sound only during playback. **REC-ONLY:** Metronome will sound only for recording. **PLAY&REC:** Metronome will sound for playback and recording. **ALWAYS:** Metronome will always sound.
Metronome Level	0–10	Volume of the metronome
Metronome Sound	TYPE1–TYPE4	**TYPE 1:** A conventional metronome sound (A bell will sound on the first beat.) **TYPE 2:** Clicks **TYPE 3:** Beeps **TYPE 4:** Cowbell
Beat Indicator Mode	REC&PLAY, ALWAYS	How the beat indicator on the panel will blink **ALWAYS:** always blinks at the specified tempo **REC&PLAY:** blinks only during playback and recording

[F2 (REC TRK)]

Parameter	Value	Explanation
Rec Track Select	MANUAL, AUTO	Specifies whether track selection will be automatic or manual when recording on the sequencer. **MANUAL:** You'll be able to select the track number manually. This is convenient when you want to record a performance that consists of more than one channel. **AUTO:** The phrase track of the same number as the current part will be selected automatically. This is convenient when you want to record only one channel in a track.

[F3 (SYNC)]

Parameter	Value	Explanation
Sync Mode	MASTER, SLAVE-MIDI, SLAVE-MTC, REMOTE	Synchronization message that the Fantom-Xa's sequencer will use for operation **MASTER:** The Fantom-Xa will be the master. Choose this setting when using the Fantom-Xa by itself without synchronizing to another device, or when you want other MIDI devices to synchronize to the Fantom-Xa. **SLAVE-MIDI:** The Fantom-Xa will be the slave. Choose this setting when you want the Fantom-Xa to synchronize to MIDI Clock messages received from another MIDI device. **SLAVE-MTC:** The Fantom-Xa will be the slave. Choose this setting when you want the Fantom-Xa to synchronize to MTC (MIDI Time Code) received from an external device. **REMOTE:** Use this setting when you wish an external MIDI device to have remote start/stop control. The tempo will be in accord with what has been set on the Fantom-Xa.
Sync Output	OFF, ON	Set this parameter "ON" when you want synchronization related MIDI messages (MIDI Clock, Start, Continue, Stop, Song Position Pointer and Song Select) to be transmitted to an external MIDI device. If not, set it "OFF."
Arp/Rhythm Sync Switch	OFF, ON	Specifies whether the arpeggio or rhythm pattern will start/stop in synchronization with the sequencer. This parameter does nothing if the sequencer is stopped. **OFF:** Start/stop will not synchronize to the sequencer. **ON:** While the sequencer is running, the arpeggio or rhythm pattern will start at the beginning of the next measure. When you stop the sequencer, the arpeggio or rhythm pattern will also stop.
Tempo Override	OFF, ON	Specifies whether the sequencer tempo will change (ON), or will not change (OFF) when you switch performance.

System Menu [F5 (D BEAM)]

[F1 (GENERL)]

Parameter	Value	Explanation
SENSIBILITY		
D Beam Sens	0–127	This sets the D Beam controller's sensitivity. The higher the value set, the more readily the D Beam Controller goes to into erect.
PART		
D Beam Part Select	KBD, PAD	Part controlled by the D Beam controller

[F2 (TRIGGER)]

Parameter	Value	Explanation
Pad Number	1–9	Pad number affected by the D Beam
Pad Velocity	1–127	Strength of the pad sound played by the D Beam controller
Pad Control Mode	MOMENTARY, LATCH	Specifies how the D Beam will behave when it is obstructed. **MOMENTARY:** The parameter will be on only while the D Beam is obstructed, and will turn off when you stop obstructing it. **LATCH:** The parameter will alternately be switched on/off each time you obstruct the D Beam.

[F3 (ASSIGN)]

Parameter	Value	Explanation
Type	CC01–31, 33–95, BEND UP, BEND DOWN, START/STOP, TAP TEMPO, ARP GRID, ARP DURATION, ARP MOTIF, ARP OCTAVE UP, ARP OCTAVE DOWN	Function controlled by the D Beam controller **CC01–31, 33–95:** Controller numbers 1–31, 33–95 **BEND UP:** Controls the pitch as specified by the "Pitch Bend Range Up" setting (p. 41). **BEND DOWN:** Controls the pitch as specified by the "Pitch Bend Range Down" setting (p. 41). **START/STOP:** Starts/Stops the sequencer. **TAP TEMPO:** Tap tempo (a tempo specified by the interval at which you move your hand over the D Beam controller). **ARP GRID:** Arpeggio Grid **ARP DURATION:** Duration of each arpeggiated note **ARP MOTIF:** Arpeggio Motif **ARP OCTAVE UP:** The range in which the arpeggio is sounded will rise in steps of an octave (maximum 3 octaves). **ARP OCTAVE DOWN:** The range in which the arpeggio is sounded will lower in steps of an octave (maximum 3 octaves).
Range Min	0–127	Lower limit of the range of the D Beam controller
Range Max	0–127	Upper limit of the range of the D Beam controller. By setting Range Max below Range Min you can invert the range of change.

[F4 (DB SYN)]

Parameter	Value	Explanation
Level & Range		
Level	0–127	Sets the volume.
Chorus Send Level	0–127	Level of the signal sent to chorus
Reverb Send Level	0–127	Level of the signal sent to reverb
Range	2OCT, 4OCT, 8OCT	Range in which the pitch of the solo synth will vary
Osc1		
Osc 1 Waveform	SAW, SQR	Waveform **SAW:** Sawtooth wave **SQR:** Square wave
Osc 1 Pulse Width	0–127	Pulse width of the waveform By cyclically modifying the pulse width you can create subtle changes in the tone. * *The Pulse Width is activated when "SQR" is selected with OSC1/2 waveform.*
Osc 1 Coarse Tune	-48– +48	Pitch of the tone's sound (in semitones, +/-4 octaves)
Osc 1 Fine Tune	-50– +50	Pitch of the tone's sound (in 1-cent steps)
Osc2 & Sync		
Osc 2 Waveform	(same as Osc 1)	
Osc 2 Pulse Width		
Osc 2 Coarse Tune		
Osc 2 Fine Tune		
Osc 2 Level	0–127	Adjust the level.
Osc Sync Switch	OFF, ON	Turning this switch on produces a complex sound with many harmonics. This is effective when the OSC1 pitch is higher than the OSC2 pitch.
Filter		
Filter Type	OFF, LPF, BPF, HPF, PKG	Type of filter **OFF:** No filter is used. **LPF:** Low Pass Filter. This reduces the volume of all frequencies above the cutoff frequency (Cutoff) in order to round off, or un-brighten the sound. **BPF:** Band Pass Filter. This leaves only the frequencies in the region of the cutoff frequency, and cuts the rest. **HPF:** High Pass Filter. This cuts the frequencies in the region below the cutoff frequency. **PKG:** Peaking Filter. This emphasizes the frequencies in the region of the cutoff frequency.
Cutoff	0–127	Frequency at which the filter begins to have an effect on the waveform's frequency components
Resonance	0–127	Emphasizes the portion of the sound in the region of the cutoff frequency, adding character to the sound. Excessively high settings can produce oscillation, causing the sound to distort.
LFO		
LFO Rate	0–127	Modulation speed of the LFO
LFO Osc 1 Pitch Depth	-63– +63	Depth to which the LFO will modulate the Osc 1 pitch
LFO Osc 2 Pitch Depth	-63– +63	Depth to which the LFO will modulate the Osc 2 pitch
LFO Osc 1 Pulse Width Depth	-63– +63	Depth to which the LFO will modulate the pulse width of the Osc 1 waveform * *The Pulse Width is activated when "SQR" is selected with Osc 1 waveform.*
LFO Osc 2 Pulse Width Depth	-63– +63	Depth to which the LFO will modulate the pulse width of the Osc 2 waveform * *The Pulse Width is activated when "SQR" is selected with Osc 2 waveform.*

Data Management Functions/ Reset to Factory Settings (Factory Reset)

UTILITY MENU screen

Backing Up User Data (User Backup)

Here's how all user data in the user area can be saved on a memory card.

The following user data will be saved.

- Performances
- Rhythm Patterns
- Songs
- Chord forms
- Patches
- Rhythm Groups
- Samples
- System settings
- Rhythm sets
- Multisamples
- Arpeggio styles

* *In order to execute User Backup, the memory card must have approximately 16MB or more free area.*

1. **Insert a memory card into the slot.**
2. **Press [MENU] to open the Top Menu window.**
3. **Press ▲ or ▼ to select "2. Utility," and then press [ENTER].**
   The UTILITY MENU screen appears.
4. **Press [F1 (BACKUP)].**
   A message will ask you for confirmation.
5. **To execute the backup, press [F6 (EXEC)].**

* *To cancel, press [F5 (CANCEL)].*

NOTE

Data that's been backed up on a Fantom-Xa must not be used to perform a restore into some other device in the Fantom-X series.

Restoring User Data that You Backed Up (User Restore)

Here's how user data saved on a memory card by the User Backup operation can be reloaded back into the user memory of the Fantom-Xa.

* *When you execute User Restore, the current contents of the user area will be completely erased.*

* *Data resulting from a backup performed on some other device in the Fantom-X series must not be used to perform a restore into a Fantom-Xa.*

1. **Into the slot, insert the memory card on which user data has been saved.**
2. **Press [MENU] to open the Top Menu window.**
3. **Press ▲ or ▼ to select "2. Utility," and then press [ENTER].**
   The UTILITY MENU screen appears.
4. **Press [F2 (RESTORE)].**
   A message will ask you for confirmation.
5. **To proceed with the restoration, press [F6 (EXEC)].**

* *To cancel, press [F5 (CANCEL)].*

6. **When the display indicates "Completed. Turn the Power off and on again," turn the power off, then on again.**

NOTE

If, after executing the User Backup operation, you add a file to the Fantom-Xa's internal memory (e.g., the TMP folder), the message "User Area Full!" may appear when you execute the User Restore operation, making it impossible to successfully carry out the restoration.
In this case, delete (p. 205) the file that you added after performing the backup, and then execute the Restore operation once again.

Factory Reset

This restores all data in the Fantom-Xa to the factory-set condition (**Factory Reset**).

NOTE

If there is important data you've created that's stored in the Fantom-Xa's User memory, all such data is discarded when a Factory Reset is performed (**the data of the internal user memory will be lost**). If you want to keep the existing data, save it on a memory card (User Backup) or save it via USB to your computer (**Using Fantom-X Librarian** (p. 210)).

1. **Press [MENU] to open the Top Menu window.**
2. **Press ▲ or ▼ to select "2. Utility," and then press [ENTER].**
   The UTILITY MENU screen appears.
3. **Press [F3 (FACTORY)].**
   A message will ask you for confirmation.
4. **To execute the Factory Reset, press [F6 (EXEC)].**

* *To cancel, press [F5 (CANCEL)].*

5. **When the display indicates "Completed. Turn the Power off and on again," turn the power off, then on again.**

NOTE

Never switch off the Fantom-Xa while executing the Factory Reset.

Initializing a Memory Card (Card Format)

Here's how to format (initialize) a memory card.

NOTE

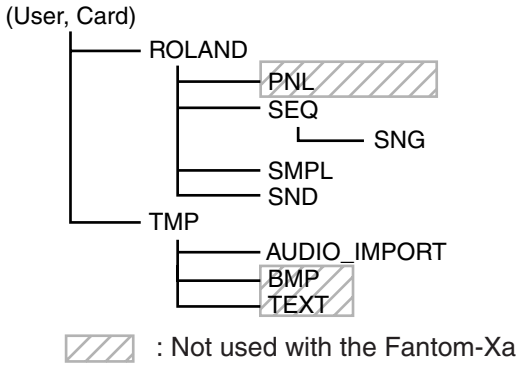
When you execute the Format operation, the contents of the memory card will be completely erased.

1. **Insert a memory card into the slot.**
2. **Press [MENU] to open the Top Menu window.**
3. **Press ▲ or ▼ to select "2. Utility," and then press [ENTER].**
   The UTILITY MENU screen appears.
4. **Press [F4 (FORMAT)].**
   A message will ask you for confirmation.
5. **To format the card, press [F6 (EXEC)].**

* *To cancel, press [F5 (CANCEL)].*

File-Related Functions (File Utility)

Here you can perform a variety of operations related to the files stored in the Fantom-Xa's user memory, and on memory cards. You can copy, delete, or move files, as well as format memory cards.
The folder structure of the user area and memory card is as follows.



NOTE

You must observe the following points when managing files with the Fantom-Xa connected to your computer via USB.

- Don't use your computer to move or delete folders within the Fantom-Xa.
- Don't use your computer to format or optimize the Fantom-Xa's user memory or memory card, or execute operations such as Scan Disk.
- The Fantom-Xa can only handle filenames consisting of single-byte alphanumeric characters.
- Don't use your computer to delete or overwrite the files located in the ROLAND/SND folder.

When copying files from your computer into the Fantom-Xa's user area or memory card, place them in the following folders.

Computer	Fantom-Xa
SONG file (.SVQ) (MRC PRO song)	ROLAND/SEQ/SNG
Standard MIDI file (SMF format 0, 1)	ROLAND/SEQ/SNG
Audio file (WAV/AIFF)	TMP/AUDIO_IMPORT

NOTE

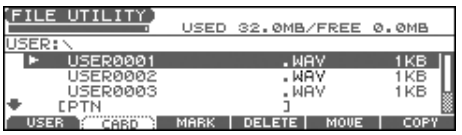
- **Don't place any files in the ROLAND/SMPL folder.**
- Don't place files of any other format in the user memory or memory card.

Basic Procedure

1. Press [MENU].

2. Press ▲ or ▼ to select "3. File Utility," and then press [ENTER].

The FILE UTILITY screen appears.



3. Press [F1]–[F6] to select the operation you want to carry out.

[F1 (USER)]: Select a file in user memory.
[F2 (CARD)]: Select a file on the memory card.
[F3 (MARK)]: If you want to select two or more files, add a check mark (✔) to the files. To remove the check mark from a selected file, select and press this button again.
[F4 (DELETE)]: Delete a selected file or files with check marks.
[F5 (MOVE)]: Move a file or files with check marks to a different folder.
[F6 (COPY)]: Copy a file or files with check marks to a different folder.
▲, ▼: Select the folder.
◀, ▶: Move between folder levels.

MEMO

If you hold down [SHIFT] and press [F5 (SET ALL)], check marks will be added to all files.
If you hold down [SHIFT] and press [F4 (CLR ALL)], check marks will be removed from all files.

* *You can also perform these operations from the FILE UTILITY screen by pressing [MENU] and selecting "1. Mark Set ALL" or "2. Mark Clear ALL."*

Copying a File (Copy)

Here's how you can copy a file to a different folder.

1. **As described in the basic procedure, select the file that you want to copy.**
   [F1 (USER)] [F2 (CARD)]: Select the memory
   ▲, ▼: Select the folder
   ◀, ▶: Move between folder levels
2. **Press [F6 (COPY)].**
   A screen will appear, allowing you to select the folder to which the file is to be copied.
3. **View the contents of the copy-destination folder.**
   [F1 (USER)] [F2 (CARD)]: Select the memory
   ▲, ▼: Select the folder
   ◀, ▶: Move between folder levels
4. **To copy the file, press [F6 (EXEC)].**

* *To cancel, press [F5 (CANCEL)].*

Deleting a File (Delete)

Here's how you can delete an unwanted file from a folder.

1. **As described in the basic procedure, select the file that you want to delete.**
   [F1 (USER)] [F2 (CARD)]: Select the memory
   ▲, ▼: Select the folder
   ◀, ▶: Move between folder levels
2. **Press [F4 (DELETE)].**
   A message will ask you for confirmation.
3. **To delete the file, press [F6 (EXEC)].**

* *To cancel, press [F5 (CANCEL)].*

Moving a File (Move)

Here's how you can move a file to a different folder.

1. **As described in the basic procedure, select the file that you want to move.**
   [F1 (USER)] [F2 (CARD)]: Select the memory
   ▲, ▼: Select the folder
   ◀, ▶: Move between folder levels
2. **Press [F5 (MOVE)].**
   A screen will appear, allowing you to select the folder to which the file is to be moved.
3. **View the contents of the move-destination folder.**
   [F1 (USER)] [F2 (CARD)]: Select the memory
   ▲, ▼: Select the folder
   ◀, ▶: Move between folder levels
4. **To move the file, press [F6 (EXEC)].**

* *To cancel, press [F5 (CANCEL)].*

Initializing a Memory Card (Card Format)

Here's how to initialize a memory card. When you execute the Format operation, the contents of the memory card will be completely erased.

1. **From the File Utility screen, press [MENU].**
2. **Press ▲ ▼ to select "3. Card Format," and then press [ENTER].**
   A message will ask you for confirmation.
3. **To format the card, press [F6 (EXEC)].**

* *To cancel, press [F5 (CANCEL)].*

Connecting to Your Computer via USB

The Fantom-Xa has two modes of USB functionality: **storage mode** for transferring files, and **MIDI mode** for sending and receiving MIDI messages. You must switch between these two modes on the Fantom-Xa; they cannot be used simultaneously.

NOTE

The USB mode (file transfer/MIDI communication) must be switched before you connect the Fantom-Xa with your computer.

Each mode can be used with the following operating systems.

* *This may not work correctly with some types of computer.*

NOTE

You must switch the Fantom-Xa to USB Storage mode before you connect the Fantom-Xa and your computer with a USB cable.

1. Press [MENU] to open the Top Menu window.

2. Press or to select "1. System," and then press [ENTER].
The System Menu window appears.

3. Press [F1 (GENERAL)] and then press [F4 (USB)].
The SYSTEM SETUP USB screen appears.

4. Press to move the cursor to "USB Mode."

5. Use the VALUE dial or [INC] [DEC] to select "STORAGE."
A message will ask you for confirmation.

6. To switch the USB mode, press [F6 (OK)].

* *If you decide not to switch, press [F5 (CANCEL)]*
USB Storage mode will be selected.

7. If you want the Fantom-Xa to start up in USB Storage mode the next time it is powered up, press [F6 (WRITE)] to save the System settings.

8. Press [EXIT] to return to the previous screen.

cf.

For details on operations in USB Storage mode, refer to **Transferring Files to or from Your Computer (Storage Mode)** (p. 207).

NOTE

You must switch the Fantom-Xa to MIDI mode before you connect the Fantom-Xa and your computer with a USB cable.

* *If you've selected USB MIDI mode, nothing can be received from the MIDI IN connector.*

1. Press [MENU] to open the Top Menu window.

2. Press or to select "1. System," and then press [ENTER].
The System Menu window appears.

3. Press [F1 (GENERAL)] and then press [F4 (USB)].
The SYSTEM SETUP USB screen appears.

4. Press to move the cursor to "USB Mode."

5. U8pears.98LUE dial or [INC] [DEC] to select "MIDI."
A message will ask you for confirmation.

6. To switch the USB mode, press [F6 (OK)].

m( )Tj-11.203 -54.641 TD[421nWE ar6a1 XANCE (U3461 TD( )Tj-[F 736switch th(6.)Tj[F1 4 Tus

Transferring Files to or from Your Computer (Storage Mode)

By connecting the Fantom-Xa with your computer via a USB cable, you can transfer files from Internal user area or a memory card to and from the hard disk or other media of your computer, in order to back up your data.

You can use software on your computer to edit wave data you've created on the Fantom-Xa. Conversely, wave data that you've created on your computer can be used on the Fantom-Xa.

In this way, USB Storage mode lets you transfer files such as patch and waves to or from a connected computer.

NOTE

Connect or disconnect the USB cable only when the Fantom-Xa is powered-off. Never connect or disconnect the USB cable or turn off the power while in USB mode or while data is being transferred.

Connections

1. **With the Fantom-Xa not connected, start up your computer.**
2. **Use a USB cable to connect the Fantom-Xa to your computer.**
3. **Turn on the power (POWER switch) of the Fantom-Xa.**

Specify the Connection-Destination

When the Fantom-Xa is connected to your computer, you can select the area on the Fantom-Xa to which a connection is to be made; either the internal user area or the memory card.

1. **Press [MENU] to open the Top Menu window.**
2. **Press ▲ or ▼ to select "4. USB Storage," and then press [ENTER].**
   The USB STORAGE screen appears.

* *If USB is not set to Storage mode, a warning of "The USB is in MIDI Mode!!" will appear when you press [ENTER] in step 2. Press [F6 (EXEC)] if you want to switch to USB Storage mode (the SYSTEM SETUP USB screen will appear). If you decide to cancel, press [F5 (CANCEL)].*

3. **Press [F2 (INTERNAL)] or [F5 (PC CARD)] to connect with your computer.**
   [F2 (INTERNAL)]: Connect to the user memory
   [F5 (PC CARD)]: Connect to the memory card

* *To cancel the connection, press [F6 (EXIT)].*

4. **The display will differ as follows, depending on the computer you're using.**

- **Windows Me/2000 users**
  A drive named "Removable disk" will be displayed within My Computer.
  Below that drive there will be folders named "ROLAND" and "TMP."
- **Macintosh, Windows XP users**
  A drive icon named "FANX USER" will appear on the desktop.
  If a memory card is connected, the volume name of the memory card will be displayed.
  Below it will be folders named "ROLAND" and "TMP."

Cautions Regarding Folders and Files

You must observe the following points when the Fantom-Xa is connected to your computer via USB.

- Don't use your computer to move or delete folders within the Fantom-Xa.
- Don't use your computer to format or optimize the Fantom-Xa's user memory or memory card, or execute operations such as Scan Disk.
- The Fantom-Xa can only handle filenames consisting of single-byte alphanumeric characters.
- Only the following types of files can be transferred between the Fantom-Xa and your computer.
  Song files (.SVQ) (MRC PRO songs)
  Standard MIDI Files (.MID)
  Audio files (.WAV/AIFF)
- To handle these files, use the appropriate method described below.

Song files, Standard MIDI Files	Place the files in the following folder. **ROLAND/SEQ/SNG** folder
Audio files	When placing the files from your computer, place them in the following location. **TMP/AUDIO_IMPORT** folder Then import the audio files. If you want to use your computer to read samples that were written by the Fantom-Xa, load the files from the ROLAND/SMPL folder into your computer.

- Don't use your USB-connected computer to delete or rewrite any files placed in the ROLAND/SND folder.
- **Don't place any files in the ROLAND/SMPL folder.**

Windows Me/2000/XP Users

1. **In My Computer, right-click the "removable hard disk" icon and execute "Remove."**

Macintosh Users

1. **Drag the Fantom-Xa drive icon into the trash.**

If you want to power off the Fantom-Xa when it is connected to your computer in Storage mode, you must first cancel USB communication on your computer as described here.

Windows Me/2000/XP Users

1. **Use the device eject button shown in the taskbar at the lower right of your computer screen to cancel the ted to 8.**

Exchanging MIDI Messages with Your Computer (MIDI Mode)

Driver Installation and Settings

In order to use the Fantom-Xa as a USB MIDI device from your computer, you must first install the USB MIDI driver. The USB MIDI driver is on the included "Fantom-X Editor CD-ROM."

In order to use USB in MIDI mode, you must install the driver from the included CD-ROM into your computer.

The correct driver and the installation procedure will depend on your system and on the other programs you are using. Be sure to read the Readme file on the CD-ROM before installation.

Windows XP/2000

\Win2kXP\Readme_e.htm

Windows Me/98/98SE

\Win98Me\Readme_e.htm

Mac OS 9 (9.04 or later)

\Fantom-X Driver OS9 (E)\Readme_e.htm

Mac OS X

\Fantom-X Driver OSX\Readme_e.htm

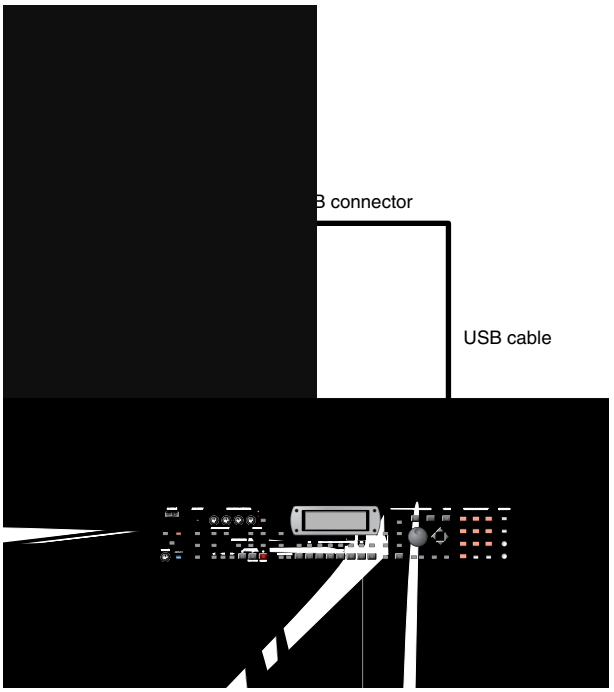
NOTE Caution when disconnecting the USB cable

You must shut down your computer before disconnecting the USB cable. Disconnecting the cable while your computer's power is on may destabilize its operation.

What is the USB MIDI Driver?

The USB MIDI Driver is a software which passes data between the Fantom-Xa and the application (sequencer software, etc.) that is running on the USB-connected computer.

The USB MIDI Driver sends data from the application to the Fantom-Xa, and passes data from the Fantom-Xa to the application.



Fantom-X Editor System Requirements

System Requirements (Windows)

- Operating System
  Microsoft® Windows® XP
  Microsoft® Windows® Me
  Microsoft® Windows® 2000 Professional
  Microsoft® Windows® 98
- CPU/Clock
  Pentium®/Celeron™ processor 400 MHz or higher
  Pentium® III 500 MHz or higher (recommended)
- Memory (RAM)
  128 M bytes or more
  256 M bytes or more (recommended)
- Display/Colors
  800 x 600 or higher/65,536 colors (16 bit High Color) or more
  1024 x 768 or higher (recommended)
- Hard Disk
  120 MB or more

* *Microsoft and Windows are registered trademarks of Microsoft Corporation.*

* *Windows® is known officially as: "Microsoft® Windows® operating system."*

* *Pentium is a registered trademark of Intel Corporation.*

System Requirements (Mac OS)

- Operating System
  Mac OS (Classic) 8.6 and 9.x
  Mac OS (X) 10.2 or later
- CPU/Clock
  PowerPC G3 233 MHz or higher (Classic)
  PowerPC G3 500 MHz or higher (Mac OS X)
- Memory (RAM)
  128 MB or more
  256 MB or more (recommended)
- Display/Colors
  800 x 600 or higher/32,000 colors or more
  1024 x 768 or higher (recommended)
- Hard Disk
  120 M bytes or more
- Others
  OMS 2.0 or later (Classic)

* *Apple and Macintosh are registered trademarks of Apple Computer, Inc.*

* *Mac OS is a trademark of Apple Computer, Inc.*

* *OMS is a registered trademark of Opcode Systems, Inc.*

NOTE

While under most conditions, a computer similar to the above will permit normal operation of the Fantom-X Editor, Roland cannot guarantee compatibility solely on these factors. This is due to numerous variables that may influence the processing environment, such as differences in motherboard design and the particular combination of other devices involved.

- Unauthorized duplication, reproduction, hiring, and lending prohibited.
- Before you open the included CD-ROM, you must read the "license agreement." Opening the CD-ROM will be taken to mean your acceptance of the license agreement.

V-LINK Parameters

Parameter	Value	Explanation
Note Tx Ch	1–16	MIDI channel that will switch Edirol DV-7PR clips/palettes and will control dissolve time
Clip 1 Note No.	0 (C -)–127 (G9)	Pads 1–9 correspond to Edirol DV-7PR clips (or palettes). We recommend that you set "Template Set" to "Note" and Clip1 Note No. to the same value as the "Pad Base Note" setting. (Quick Setup; p. 118)
Dissolve Time	OFF, CC01, CC05, CC07, CC10, CC11, CC71–74, CC91–93, AFTERTOUCH (Channel Aftertouch)	Control change number that controls the dissolve time (time over which the image switches)
Ctrl Tx Ch	1–16	MIDI channel that will control the Edirol DV-7PR color Cb/Cr, brightness, and video effect switching
Play Speed Ctrl	0.0-1.0-2.0, 0.5-1.0-2.0, 0.0-1.0-4.0, 0.5-1.0-4.0, 0.0-1.0-8.0, 0.5-1.0-8.0, 0.0-1.0-16.0, 0.5-1.0-16.0, 0.0-1.0-32.0, 0.5-1.0-32.0, 0.0-2.0-4.0, 0.0-4.0-8.0, 0.0-8.0-16.0, 0.0-16.0-32.0, -2.0-1.0-4.0, -6.0-1.0-8.0	Range of video playback speed The three values are the playback speeds (multiples of normal speed) at the left, center, and right positions of the pitch bend.
Color Cb Ctrl	OFF, CC01, CC05, CC07, CC10, CC11, CC71–74, CC91–93, AFTERTOUCH (Channel Aftertouch)	Control change number that controls the Cb color of the image
Color Cr Ctrl		Control change number that controls the Cr color of the image
Brightness Ctrl		Control change number that controls the brightness of the image
VFX1–4 Ctrl		Control change number that controls the video effect * *VFX2–4 are not supported by the Edirol DV-7PR.*
Fade Ctrl		Control change number that controls the output fade
Clip Filter	OFF, ON (✔)	Checked clips can be switched. Enable/disable switching for each clip.

Using the Clip Filter

For example, suppose that of the rhythm set you input in the part used for V-LINK (i.e., the part of the same number as the Note Tx Channel), you want only the kick and snare to switch clips. In this case, check only the clips that correspond to the note numbers of the kick and snare. The clips will switch when the kick or snare plays.

1. In the V-LINK SETUP screen, press [F1 (FILTER)].
The Clip Filter window appears.

2. Use [CURSOR] to select a clip.

3. Use the VALUE dial or [INC] [DEC] to add or remove the check mark (✔).
Checked clips can be switched.

Resetting the Image

1. In the V-LINK screen, press [F3 (CLIP)] or [F4 (ALL)].

[F3 (CLIP)] (Clip Reset)	Turn off the image (solid black).
[F4 (ALL)] (All Reset)	The effect applied to the image will be reset, and brightness, color difference, etc. will all return to the default value.

* *For details on clips/palettes, dissolve time, color difference signals (Cb/Cr), refer to the Edirol DV-7PR manual.*

* *The Fantom-Xa does not support the Edirol DV-7PR's dual stream mode.*

Installing the Wave Expansion Board

An optional Wave Expansion Board (SRX series; sold separately) can be installed in the Fantom-Xa.

Wave Expansion Boards store Wave data, patches, and rhythm sets, and by equipping the Fantom-Xa with these boards, you can greatly expand your sound palette.

Cautions When Installing a Wave Expansion Board

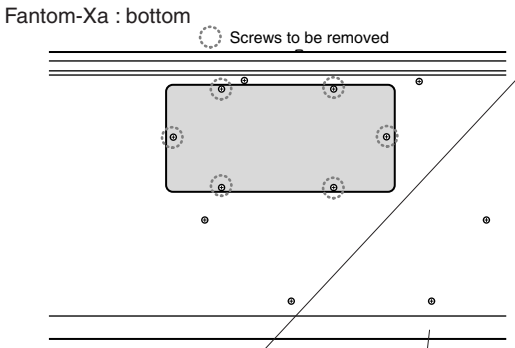
- To avoid the risk of damage to internal components that can be caused by static electricity, please carefully observe the following whenever you handle the board.
  - Before you touch the board, always first grasp a metal object (such as a water pipe), so you are sure that any static electricity you might have been carrying has been discharged.
  - When handling the board, grasp it only by its edges. Avoid touching any of the electronic components or connectors.
  - Save the bag in which the board was originally shipped, and put the board back into it whenever you need to store or transport it.
- Use a Phillips screwdriver that is suitable for the size of the screw (a number 2 screwdriver). If an unsuitable screwdriver is used, the head of the screw may be stripped.
- To remove a screw, rotate the screwdriver counter-clockwise. To tighten the screws, rotate the screwdriver clockwise.

- When installing a Wave Expansion Board, remove only the specified screws.
- Be careful that the screws you remove do not drop into the interior of the Fantom-Xa.
- Do not leave the bottom cover removed. After installation of the Wave Expansion Board is complete, be sure to replace the cover.
- Be careful not to cut your hand on the edge of the cover or the opening edge while removing the cover.
- Do not touch any of the printed circuit pathways or connection terminals.
- Never use excessive force when installing a circuit board. If it doesn't fit properly on the first attempt, remove the board and try again.
- When circuit board installation is complete, double-check your work.

How to Install a Wave Expansion Board

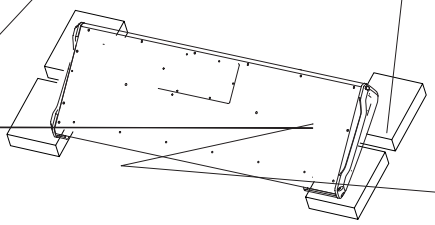
Install the Wave Expansion Board after removing the bottom panel cover.

1. **Before installing the Wave Expansion Board, turn off the power of the Fantom-Xa and all connected devices, and disconnect all cables, including the AC adaptor, from the Fantom-Xa.**
2. **From the Fantom-Xa, remove only the screws shown in the following diagram, and detach the cover.**

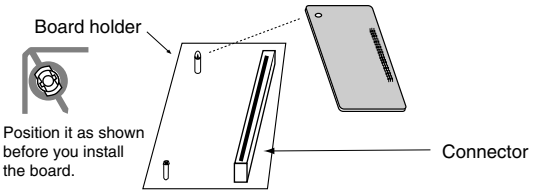


* *When turning the unit upside-down, get a bunch of newspapers or magazines, and place them under the four corners or at both ends to prevent damage to the buttons and controls. Also, you should try to orient the unit so no buttons or controls get damaged.*

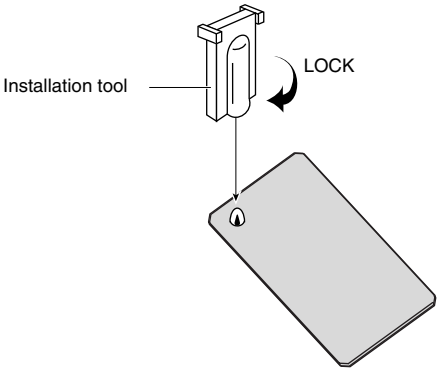
* *When turning the unit upside-down, handle with care to avoid dropping it, or allowing it to fall or tip over.*



3. As shown in the following illustration, plug the connector of the Wave Expansion Board into the connector of the relevant slot, and at the same time insert the board holder through the hole of the Wave Expansion Board.



4. Use the Installation Tool supplied with the Wave Expansion Board to turn the holders in the LOCK direction, so the board will be fastened in place.



5. Use the screws that you removed in step 2 to fasten the cover back in place.

Checking the Installed Wave Expansion Board

After installation of the Wave Expansion Board has been completed, check to confirm that the installed board is being recognized correctly.

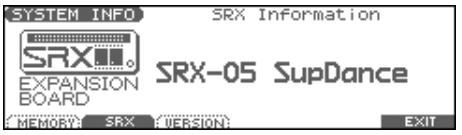
1. Turn on the power, as described in p. 16.

2. Press [MENU] to open the Top Menu window.

3. Press ▲ ▼ to select "1. System," and then press [ENTER].

4. Press [F6 (INFORMATION)].
The SYSTEM INFO screen appears.

5. Press [F2 (SRX)].
Verify that the name of the installed Wave Expansion Board is displayed.



* *If the name of the board does not appear, it is possible that the board is not being recognized correctly. Turn off the power as described in* ***Turning Off the Power*** *(p. 16), and re-install the Wave Expansion Board correctly.*

6. Press [EXIT] to exit the SYSTEM INFO screen.

Expanding the Memory

The Fantom-Xa comes with 4 MB of memory into which audio samples can be loaded. However, in some cases, 4 MB of memory will be insufficient for loading large amounts of data. In such a case, you will have to add separately sold memory (DIMM). Memory can be expanded up to 64/128/256/512 MB.

Before expanding the memory, consult with your retailer, the nearest Roland Service Center, or an authorized Roland distributor.

Precautions for Expanding Memory

- To avoid the risk of damage to internal components that can be caused by static electricity, please carefully observe the following whenever you handle the board.
  - Before you touch the board, always first grasp a metal object (such as a water pipe), so you are sure that any static electricity you might have been carrying has been discharged.
  - When handling the board, grasp it only by its edges. Avoid touching any of the electronic components or connectors.
  - Save the bag in which the board was originally shipped, and put the board back into it whenever you need to store or transport it.
- Use a Phillips screwdriver that is suitable for the size of the screw (a number 2 screwdriver). If an unsuitable screwdriver is used, the head of the screw may be stripped.
- To remove a screw, rotate the screwdriver counter-clockwise. To tighten the screws, rotate the screwdriver clockwise.

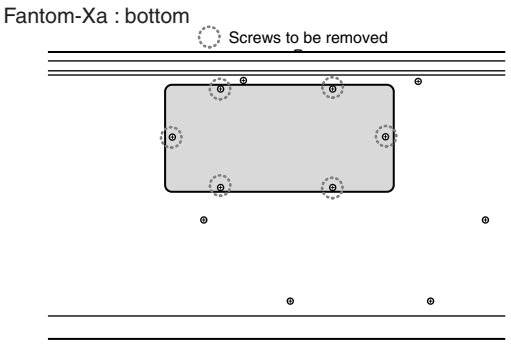
- Install only the specified memory DIMM board. Remove only the specified screws.
- Be careful that the screws you remove do not drop into the interior of the Fantom-Xa.
- Do not leave the bottom cover removed. After installation of the memory module is complete, be sure to replace the cover.
- Be careful not to cut your hand on the edge of the cover or the opening edge while removing the cover.
- Do not touch any of the printed circuit pathways or connection terminals.
- Never use excessive force when installing a circuit board. If it doesn't fit properly on the first attempt, remove the board and try again.
- When circuit board installation is complete, double-check your work.

How to Expand the Memory

Install the memory module after removing the bottom panel cover.

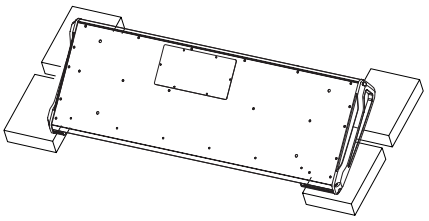
1. **Before expanding the memory, turn off the power of the Fantom-Xa and all connected devices, and disconnect all cables, including the AC adaptor, from the Fantom-Xa.**

2. **From the Fantom-Xa, remove only the screws shown in the following diagram, and detach the cover.**

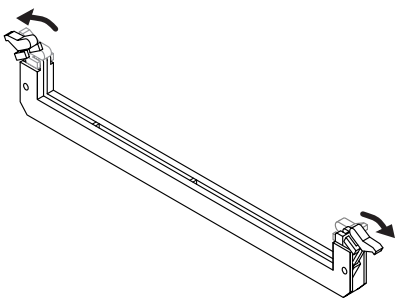


* *When turning the unit upside-down, get a bunch of newspapers or magazines, and place them under the four corners or at both ends to prevent damage to the buttons and controls. Also, you should try to orient the unit so no buttons or controls get damaged.*

* *When turning the unit upside-down, handle with care to avoid dropping it, or allowing it to fall or tip over.*



3. **Press outward the white clips at either end of the socket should be in the downward position.**



4. **Paying tio
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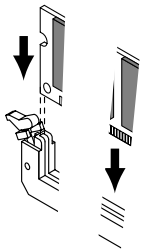
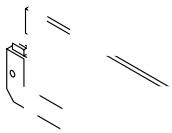
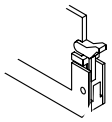


* *If you ve
and i tir*

5. **Mov he
mem ry**





6. **Use t at you remove n step 2 to fasten the
cove lace.**

Rem ing the M ry

To remove the memory modu t ie installation procedure.

1. **Simultaneously pres ie white clips located at
either end of the s**

2. **or the socket.**

memory is not being recognized properly. Turn off the power as described in ***Turning Off the Power*** *(p. 16), and re-install the memory correctly.*

6. **Press [EXIT] to exit the SYSTEM INFO screen.**

Specifications of the expansion memory (DIMM) that can be used

Number of pins:	168-pin
Speed:	100 MHz (PC100 CL=2)
	133 MHz (PC133 CL=3)
Voltage:	3.3 V
Capacity:	64/128/256/512 MB
Board height:	38 mm or less

NOTE

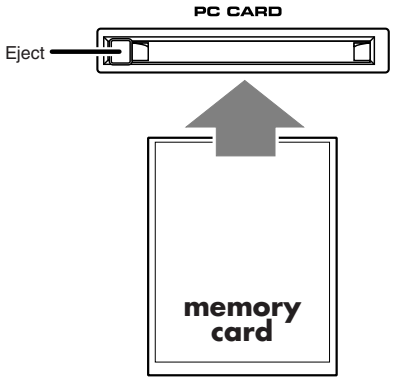
The Fantom-Xa has been confirmed to work with standard memory that meets the above specifications. However, we cannot guarantee that all memory of these specifications will work correctly. Please be aware that even with identical specifications, differences in the design of the memory module or the conditions of use may mean that a memory module may not be usable.

Using a Memory Card

The Fantom-Xa features a PC card slot, allowing you to use CompactFlash or SmartMedia via the appropriate PC card adaptor.

Before Using the Memory Card

Make sure that the correct side of the card is facing upward, and insert it into the Fantom-Xa's PC card slot. When you need to remove the card, press the eject button located beside the card.



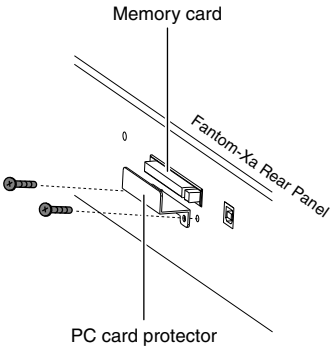
Writing data to the card

Patches, rhythm sets, performances, samples, and song data can be written to the card. For details on the writing procedure, refer to the explanation for the corresponding parameters.

Installing the PC Card Protector

The Fantom-Xa provides a PC card protector to prevent theft of the memory card. To install the PC card protector, use the following procedure.

1. **Use a screwdriver to remove both of the screws from the bottom side of the PC CARD slot.**
2. **Insert the memory card into the PC CARD card slot.**
3. **Use the screws to fasten the PC card protector as shown below.**



Troubleshooting

If the Fantom-Xa does not function in the way you expect, first check the following points. If this does not resolve the problem, consult your dealer or a nearby Roland Service Station.

* *If any sort of message is being displayed on the screen during an operation, refer to* ***Error Messages*** *(p. 225).*

Problems Concerning the Entire Fantom-Xa

Q The power does not turn on.

A Make sure that the Fantom-Xa's AC adaptor is connected correctly to its power inlet and to the AC outlet (p. 15).

Issues Related to Sound

Q There is no sound.

A Check the following points.

- Is the power for connected amps and speakers turned on? Is the volume turned all the way down?
- Is the VOLUME knob turned all the way down?
- Have connections been made correctly?
- Can you hear sound through headphones?
  If there is sound in the headphones, it is possible that the connection cables are broken, or that your amp/mixer has malfunctioned. Check your cables and amp/mixer system once again.
- If you do not hear sound when you play the keyboard, check whether the Local Switch is turned OFF.
  Make sure that the Local Switch parameter is turned on (p. 197).
- Have all tones in the patch been turned off?
  Turn on "Tone Switch."
- The Part level settings may be too low.
  Access the Level parameter, and check the level of each part (p. 73).
- Are the Effect settings correct?
  Check the Effect settings ON or OFF, the Effect Balance or Level (p. 157).
- Are the settings for the output destination correct?
  Check the various output assign settings (p. 74).
- Is the Wave Expansion Board properly installed?
  When selecting the settings that stipulate the use of EXP waves, Patches, or Rhythm Sets, check that the Wave Expansion Board is installed properly in the slot (p. 214).
- Has the volume been lowered by pedal operations or by MIDI messages (volume messages or expression messages) received from an external MIDI device?
- Have the samples been loaded correctly? (p. 153)

Q A specific Part does not sound.

A Check the following points.

- Has the volume level of the part been lowered?
  Adjust the Level parameter to raise the volume of the part that is not heard (p. 73).
- Is the part being muted?
  Set the Mute parameter to "OFF" (p. 73).

Q Specific pitch ranges do not sound.

A Has a restricted range of notes been set?

If a specific range of notes does not sound, check the Key Range settings for the Patch Tone, the Performance Part.

- **Tone Key Range**
  Key Range Lower/Key Range Upper parameter (p. 42)
- **Part Key Range**
  K.L/K.U parameter (p. 75)

Q The sound is distorted.

A Check the following points.

- Is an effect which distorts the sound being applied?
  If the sound for a specific patch or part is distorted, lower the volume level on that part.
- If all sounds are distorted, use the VOLUME knob to lower the volume level.
- Could the Output Gain be excessively high?
  In "System," check the "Sound" parameter.

Q Pitch is incorrect.

A Check the following points.

- Is the tuning of the Fantom-Xa incorrect?
  Check the Master Tune parameter setting (p. 194).
- Has the pitch been changed by pedal operations or by Pitch Bend messages received from an external MIDI device?
- Have the Coarse Tune or Fine Tune parameters been set for specific Parts?
  Check the Coarse Tune parameter and Fine Tune parameter settings (p. 74).

Q The sound is interrupted.

A Sounds will be interrupted if more than 128 voices are used simultaneously.

- Reduce the number of Tones that you are using.
- Increase the Voice Reserve setting for parts that must not drop out (p. 75).

Q When I play the keyboard, notes do not stop.

A Is the pedal polarity of the Hold Pedal reversed?

Check the Hold Pedal Polarity parameter setting (p. 195).

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Issues Related to Effects

Q Effects not applied.

A Check the following points.

- The "MFX," "CHO," "REV" or "MASTER" effect switches located in the upper part of the PLAY screen may have been turned off.
  Press [EFFECTS]/[F6 (SWITCH)] to turn them on.
- Are the various effect settings correct? (p. 157)
- If the send level of each effect is set to 0, the effect will not be applied. Check the settings.
- Even with send levels to each effect set at 0, effects are not applied if the Multi-effects Output Level, the Chorus Level, or the Reverb Level is set to 0. Check each setting.
- If Output Assign is set to other than "MFX," the Multi-effects sound will not be output.
- If Output Assign is set to "PATCH" for each Part of the Performance, the sound will be output according to the Output Assign settings of the Patch (for each Tone) which is assigned to those Parts. This means that if Output Assign for the Patch (each Tone) is set to other than "MFX," the Multi-effects sound will not be output.

Q The Modulation or other controller is always on.

A Check the Matrix Controller settings (p. 49).

The Fantom-Xa allows you to use the Matrix Control to control Patches in real time. The Matrix Control functions as the control source for the Control Change and other MIDI messages received by the Fantom-Xa, and makes changes to the various Patch parameters based on these messages.

Depending on these settings, the Fantom-Xa may be responding to MIDI messages sent from external MIDI devices, and may result the Patches sounding different than intended.

Q Raising the chorus or reverb send level for each part of a performance still does not cause the effect to be applied sufficiently.

A Although you can make Send level settings to the Chorus and Reverb for each individual Part in a Performance, these values only set the upper limit of the Chorus and Reverb Send levels for the Patch used. Accordingly, even when the value is set to the maximum of 127, if the Send level is lowered in the Patch being used, there will be no effect. In addition, different Patch Chorus and Reverb Send level settings can be used according to whether or not the multi-effects are used.

Q Using the Matrix Control or other such means to control the LFO results in noise when the Pan is changed suddenly.

A Lower the change in speed (LFO Rate).

Due to the specialized processing used for the Pan, which alters the volume level in each of the left and right sides, sudden Pan movements causing rapid changes in these levels creates large changes in volume, and noise from this may be audible as a result.

Q Multi-effect 43: TAP DELAY or other delay time value is set to the note, and then the tempo is slowed down, does the delay time not change beyond a fixed length?

A Such Delay time settings have an upper limit, so if the upper limit of a value set to the note is exceeded when the tempo is retarded, that upper value cannot rise any further. The upper time limit for each is the maximum value that can be set other than the numerical value for the beat.

Issues Related to Saving Data

Q The Performance sounds different than when it was written.

A Check the following points.

- If you have modified the settings of a patch used by a performance, or if the temporary patch of the performance has been modified by an external MIDI device, these patches must also be saved.
  If patches used by a performance have been edited when you write that performance, the Fantom-Xa will display a message asking whether you want to discard these patches. In such cases, first save the patch (p. 37) or rhythm set (p. 57), and then save the performance (p. 72) again.
- The Mastering Effect settings may have changed. (These settings are not stored as part of a performance.)

Q Patches sound different than when written.

A Check the following points.

- The write operation cannot be used to save Patches as changed in Patch mode using Control Change messages from an external MIDI device.
- The Mastering Effect settings may have changed. (These settings are not stored as part of a patch.)

Q The Arpeggio and D Beam controller settings in the Performance are different than those for the Patch.

A Since the Fantom-Xa stores arpeggio and D Beam controller settings for each performance, it will operate according to the arpeggio and D Beam controller settings that were specified for each performance.

Issues Related to Sequencer

Q Song data does not play back correctly

A Check the following points.

- Has the Receive General MIDI/General MIDI 2 System On Switch been turned ON?
  Set the Receive GM System ON/Receive GM2 System ON parameter (SYSTEM/MIDI/RX) to "ON" (p. 198).
- Are you trying to start playback from midway through the song?
  The beginning of a GM score song contains a General MIDI/ General MIDI 2 System On message. In some cases, a GM Score cannot be played back correctly unless this message is received.
- Are you trying to play song data designed for the GS Format?
  When the Fantom-Xa receives a GS Reset message, the Fantom-Xa is enabled for the GS format. This permits playback of music data bearing the GS logo (GS music data). However, data created exclusively for the Sound Canvas Series may not play back properly on the Fantom-Xa.

Q After recording, the song does not sound when I play it back.

A Have the tracks been muted?

Defeat muting (p. 73).

Q The tempo is different than the last time I played back the song.

A If a song is played back after the tempo is changed, then the new tempo is not saved unless the song is saved to the user memory or memory card. Conversely, the previous tempo will be erased when you save the song. When saving songs, carefully check the current tempo.

Q Locate Positions set in song have disappeared.

A Check the following points.

- Was the disk saved in a format other than MRC-Pro format (SMF 0 or 1)? Locate positions will be saved with the song data only when saving in MRC-Pro format.
- Are you using Quick Play? In order to use locate positions, the song must be loaded into the Fantom-Xa.

Q Sound Device Tones Are Switched Arbitrarily

A Use the Microscope (p. 144) to check the following points.

- Has an unneeded program change been input? Or are there duplicate program changes?
- Were any mistakes made in setting the data MIDI channels when Program Change messages were input?

Q Data supposed to be present does not appear in microscope.

A Check the following points.

- Are the wrong tracks selected?
- In View Select (p. 146), is any data set not to be displayed?

Q After using a MIDI sequencer to play a song, sounds stopped playing, and no sound is played even when Program Changes are sent.

A It could be that a Bank Select in the song data that is not specified by the Fantom-Xa was encountered in the song. No sound is played if the tone group is not one designated by the Fantom-Xa with Bank Select MSB/LSB. Note that if you omit the Bank Select, and send only the Program Change, the tone in the currently selected group that has the specified Program Change number will play. Try reselecting the tone using the panel controls. Furthermore, when selecting tones from an external MIDI device, be sure to send the Bank Select MSB/LSB and the Program Change as a single set for reliable reproduction. First sending the MSB and LSB (the order in which these are sent does not matter), followed by the Program Change.

In some cases, you may be unable to hear any sound after playing the last song that was faded-out. This may be because the volume has been lowered by volume messages or expression messages. Check the value of these messages, and set them to appropriate values.

Q Performances are sluggish, or have interruptions.

A Problems of sluggish and interrupted performances can crop up very easily when the sequencer or sound generator used for the performance has to handle heavy data loads.

Main causes and possible corrective measures are considered below.

- Are more than 128 voices playing simultaneously?
  Reduce the number of voices. The composition of Fantom-Xa Patches is such that up to eight Waves may be used for one Patch. When using such Patches, even though only one sound may be heard, it is actually eight sounds that are being played simultaneously. In addition, with certain sounds like continuous sounds with long releases, even though the actual sound may not be audible to you, processing for playing the sound is still underway, so in these cases as well, the performance data can differ from the actual number of voices being played.
- Are you using a Patch that uses a lot of LFO?
  Try changing to a different Patch. LFO processing invariably places a big load on the machine, so heavy use of the LFO slows down processing for the Fantom-Xa overall, which can end up having affecting the expression of sounds themselves.
- Is the data concentrated at the beginning of the beats in the sequence data?
  Avoid overlapping data with the same timing by setting an offset of 1–2 clocks instead. Data may easily become concentrated at the beginning of the beats in the song data when, for example, the song data is input using Step Recording, or if the data is quantized after being input with a keyboard in real time. Because of this, large amounts of data are sent to the Fantom-Xa, and the processing for expressing sounds becomes bogged down.

- Is there a Program Change at the point where the song performance is sluggish?
  Change the position of the Program Change. When Program Changes are inserted in songs, processing time for switching patches increases, which may then cause the performance to become sluggish.
- Is there a System Exclusive message at the point where the song performance is sluggish?
  Move the location of the data. System Exclusive messages contain large amounts of data, thus placing a heavy burden on sequencers and sound modules. Try repositioning data and changing System Exclusive messages to Control Changes for any data for which Control Changes can be substituted.
- Is there an Aftertouch or other such large Control Change at the point where the song performance is sluggish?
  Move the location of the data. If the data is no longer needed, delete the data. In some cases, when using a keyboard that features aftertouch to input data, you may end up inputting huge amounts of data before realizing this is happening. Such large amounts of data can place an excessive load on your sequencer and sound module.

  TIP
  You can use the Track Edit operation Data Thin (p. 143) to thin out unwanted messages.

Issues Related to MIDI and External Devices

Q No Sound from connected MIDI device.

A Check the following points.

- Is the instrument set to transmit MIDI messages?
- **In Patch Mode**
  Kbd Patch Rx/Tx Channel parameter (Keyboard part) (p. 197)
  Pad Patch Rx/Tx Channel (Pad part) (p. 197)
- **In Performance Mode**
  KBD switch (p. 68).

Q Exclusive messages are not received.

A Check the following points.

- Is the instrument set to receive Exclusive messages?
  Set the Receive Exclusive parameter to "ON" (p. 198).
- Does the Device ID number of the transmitting device match the Device ID number of the Fantom-Xa?
  Check the Device ID parameter (p. 197).
- Are you attempting to write to the User area? Data can be written to the User area only in Librarian mode.

Q I connected an external sequencer or MIDI keyboard to the MIDI IN connector, and attempted to play a Fantom-Xa rhythm set, but there was no sound. Why?

A Check to make sure that the MIDI Transmit channel of the external MIDI device and the Fantom-Xa's MIDI Receive channel are matched. The MIDI Receive channel used by the Fantom-Xa in Patch mode is set with the Kbd Patch RX/TX Channel parameter (keyboard part) and Pad Patch RX/TX Channel parameter (pad part). Rhythm Set performance data is generally received on MIDI Channel 10.

Q Messages from MIDI IN are not being received.

A Additionally, the MIDI IN connector cannot be used if USB Mode (p. 194) is set to MIDI. Set the USB mode to Storage.

Q When using sequencing software, operating the knobs or other controls does not affect the sound.

A For some sequencing programs, System Exclusive messages are not transmitted by the Thru function. If you are using such sequencer software and want to record system exclusive messages, turn on the following parameters.

- **In Patch Mode**
  Local Switch parameter (p. 197).
- **In Performance Mode**
  KBD switch (p. 68).

Q When the Bend Range for a Patch is increased (48), the pitch does not rise sufficiently, even when a MIDI Pitch Bend message is received.

A While Patch Bend Ranges can be set anywhere between 0 and 48, when certain Waves in which the pitch is raised (in the + direction) are used, the pitch may stop rising at a fixed point, rather than continuing to go up. Although a value of 12 is ensured for the upper limit of raised pitches, use caution when setting the Bend Range above this figure.

Issues Related to Sampling

Q External input sound cannot be heard/volume is too low.

A Check the following points.

- Could [MIX IN] be unlit?
  Press [MIX IN] so it is lit.
- The level of the external input may be lowered.
  When you sample, use the LEVEL knob to adjust the level appropriately.
- Hold down [SHIFT] and press [MIX IN] to access the Input Setting screen, and check the Level settings.
- The volume of the device connected to AUDIO INPUT may be lowered.
  Adjust it to an appropriate level.
- Are the audio cables connected correctly?
  Check the connections.
- An audio cable may be broken.
- Could you be using an audio cable with a built-in resistor?
  Use a connection cable that does not contain a resistor (e.g., Roland PCS series).

Q External input sound is not stereo/is not monaural.

A Check the following points.

- Stereo Switch parameter (p. 100) may be set to monaural (stereo).
- Could the Input Select parameter be set to "LINE IN L," or "MICROPHONE"?
  Hold down [SHIFT] and press [MIX IN] to access the Input Setting screen, and set "Input Select" to "LINE IN L/R."

Q Mic sound is not output/is too weak.

A Check the following points.

- Is the mic cable connected correctly?
  Check the connection.
- The mic cable may be broken.
- The input source may be set to something other than mic.
  Hold down [SHIFT] and press [MIX IN] to access the Input Setting screen, and set "Input Select" to "MICROPHONE."
- The mic level may have been lowered.
  When sampling, use the EXT SOURCE "LEVEL" knob to adjust the level appropriately.

Q Can't record a sample.

A Check the following points.

- Is there enough memory capacity?
  If there is insufficient sample memory, a message of "Sample Memory Full!" will appear when you attempt to sample (p. 105).
  Erase unneeded samples to increase the amount of free space.
  If there is still not enough, install additional memory (DIMM modules). (p. 216)

Q Sampled sound contains excessive noise or distortion.

A Check the following points.

- Is the input level appropriate? If the input level is too high, the sampled sound will be distorted. If it is too low, noise will be heard. When sampling, turn the LEVEL knob in the Sampling Standby screen (p. 100) to adjust the level while watching the level meter displayed in the left part of the display.
- Are the effect settings appropriate?
  Some types of effect may increase the level louder than the original sample, or may intentionally distort the sound. Some effects will also cause noise to be emphasized.
  Temporarily turn off effects, and check whether the sample itself contains noise or distortion. Then adjust the effect settings appropriately.
- Are multiple samples being played simultaneously?
  Even if the level of each individual sample is appropriate, simultaneously playing multiple samples may cause the overall level to be excessively high, causing distortion. Lower the level of each sample so that the sound is not distorted.

Issues Related to a Memory Card

Q Can't select data from a memory card.

A Check the following points.

- Is the memory card inserted correctly?
  Turn off the power, remove the memory card, then re-insert the memory card correctly.
- Is the memory card an appropriate type?
  The Fantom-Xa can use either PC card type memory cards, or another type of memory card via a PC card adaptor.

Q I can't use a memory card.

A Is the memory card formatted?

An unformatted floppy disk cannot be used. Perform the Format procedure.

Error Messages

If an incorrect operation is performed, or if processing could not be performed as you specified, an error message will appear. Refer to the explanation for the error message that appears, and take the appropriate action.

Message	Meaning	Action
Cannot Edit Preset Sample!	This is a preset sample, and therefore cannot be edited.	—
Card Not Ready!	A memory card is not inserted in the slot.	Insert a memory card into the slot.
Data not found	The data for placement is not specified.	—
Empty Pattern	The Pattern has no data in it, so the Pattern Call message cannot be recorded in Step Recording.	—
Empty Sample!	The sample contains no data.	Select a sample that contains data.
Empty Song!	The song has not been recorded, and therefore cannot be played.	Select a song that contains data.
File Name Duplicate	A file with the same name already exists.	Delete the file bearing the same name from the disk, and if overwriting and saving the data, merely save the file. If you do not want to delete the file with the same name from the disk, either save the file with a different name.
Illegal File!	The Fantom-Xa cannot use this file.	—
Memory Damaged!	The contents of memory may have been damaged.	Please perform the Factory Reset operation. If this does not resolve the problem, please contact your dealer or the nearest Roland Service Center.
Memory Full!	Saving is not possible because there is insufficient space in the user area or memory card.	Delete unneeded data.
MIDI Offline!	There is a problem with the MIDI cable connection.	Check that the MIDI cable has not been disconnected or broken.
No More Note Numbers!	A maximum of 16 different note numbers can be used in one style of the arpeggio/rhythm function.	Please delete unneeded notes.
No More Sample Numbers!	The sample cannot be divided any further. Since fewer than 256 consecutive sample numbers are vacant, no further sampling is possible.	Erase unneeded samples in order to allocate 256 or more consecutive sample numbers.
No More Song Numbers!	No more songs can be saved. A maximum of 256 songs can be handled simultaneously for both the user bank and card bank.	Please delete unneeded songs.
Now Playing!	Since the Fantom-Xa is playing, this operation cannot be executed.	Stop playback before you execute the operation.
Permission Denied!	The file is protected.	—
Playback Tempo Range Over	Tempo values exceed the allowable limit, and data is created in which the closest time available within the allowable range is specified.	—
Recording Parameter Error	You are attempting to begin recording after a looped segment.	You are attempting to begin recording within or before a looped segment.
Rec Over Flow	Since a large amount of recorded data was input all at once, it could not be processed correctly.	Reduce the amount of recorded data.
Rhythm Note Range Over!	The pad selected for Assign To Pad is outside the range of the rhythm set.	Select a pad that is within the range of the rhythm set.
Sample Length Too Short!	The sample is too short, and cannot be edited correctly.	If the sample is extremely short, editing may not produce the desired result.
Sample Memory Full!	Since there is insufficient sample memory, no further sampling or sample editing is possible.	Erase unneeded samples.
Song Full	Since the maximum number of notes that can be recorded in a song or pattern has been exceeded, no further recording/editing is possible.	Use the track edit Delete or Erase commands to remove unneeded data from the song/pattern that you are recording/editing.
Song Format Error	This song is damaged.	This song cannot be used.
Song Not Found	The selected song cannot be found.	—
Too Many Sample Selected!	The operation cannot be executed, since marks are assigned to more than one sample.	Either clear the marks, or mark only one sample.
Unformatted!	The memory card is in an unsupported format.	Format the memory card.
You Cannot Assign	The sample cannot be assigned to a pad.	Assign To Pad requires that all pads be playing a rhythm set. Assign a rhythm set to the Pad part. Turn off the RPS function. Turn off the rhythm switch. Turn off the ARPEGGIO/RHYTHM function.
You Cannot Copy This Message	This message cannot be copied.	—
You Cannot Erase This Message	This message cannot be erased.	—
You Cannot Move This Message	This message cannot be moved.	—
You Cannot Quick Play S-MRC Song	This is a SuperMRC song; it cannot be played back in Quick Play.	Save the data as an MRC Pro song.

Performance List

USER (User Group)

CC#0 = 85, CC#32 = 0

No.	Name	No.	Name
001	Bump It Up!	033	R&B Spirit
002	Save Some	034	MidnihgtRace
003	Auto Slicer	035	Krafty
004	High-Nrg	036	Denki Samba
005	2-byte	037	High-Speed
006	*Graceful	038	Light Step
007	Merry Festa	039	Nice“Slicer”
008	AutoNoiseOSC	040	AutoSequence
009	Rocker Set	041	TranceReady?
010	Sound Alarm	042	Noon Gig
011	Grand Orch	043	OctEG w/Back
012	Ac.Gtr w/ARP	044	Curious Beat
013	Bend’nMod Me	045	Rnd Rhythm
014	Mini Growl	046	South Wind
015	Oh So Smooth	047	Ritmo Basico
016	Blue Ocean	048	Phase EP
017	Groovin’Beat	049	Rotary Multi
018	Reflector	050	Burning Lead
019	Seaside	051	Dist Gt Mult
020	SuperStepLFO	052	Delay Santur
021	Neo City	053	Str Stack FS
022	Inorganic	054	Brass Sec FS
023	Phase D	055	EpicTrncySyn
024	Air Pocket	056	Highland
025	Dawn Humming	057	Neutron
026	Fat “Waves”	058	Marshland
027	Shuffle-Pop	059	AerialGarden
028	Vine	060	FreeFall Pad
029	Pull Back	061	MultiDly Syn
030	R&B EP Phr	062	Slice Rv Hit
031	PopBrass&Bs	063	Robot Bass
032	Groove Note	064	Gated Drum

PRST (Preset Group)

CC#0 = 85, CC#32 = 64

No.	Name	No.	Name
001	Seq:Template	033	Fat “Waves”
002	Oh So Smooth	034	Shuffle-Pop
003	Phase EP	035	Pull Back
004	Rotary Multi	036	R&B EP Phr
005	Ac.Gtr w/ARP	037	PopBrass&Bs
006	Burning Lead	038	Groove Note
007	Dist Gt Mult	039	R&B Spirit
008	Delay Santur	040	Reflector
009	Str Stack FS	041	Sound Alarm
010	Brass Sec FS	042	MidnihgtRace
011	Grand Orch	043	Bend’nMod Me
012	EpicTrncySyn	044	Krafty
013	Highland	045	Denki Samba
014	Neutron	046	High-Speed
015	Marshland	047	Light Step
016	SuperStepLFO	048	Nice“Slicer”
017	AerialGarden	049	Auto Slicer
018	FreeFall Pad	050	AutoSequence
019	MultiDly Syn	051	TranceReady?
020	Slice Rv Hit	052	Noon Gig
021	AutoNoiseOSC	053	OctEG w/Back
022	Robot Bass	054	Rocker Set
023	Gated Drum	055	High-Nrg
024	Bump It Up!	056	2-byte
025	Save Some	057	Curious Beat
026	Neo City	058	Groovin’Beat
027	Inorganic	059	Mini Growl
028	Phase D	060	Rnd Rhythm
029	Air Pocket	061	Seaside
030	Dawn Humming	062	South Wind
031	Blue Ocean	063	Ritmo Basico
032	Merry Festa	064	GM2 Template

CARD (Card Group)

CC#0 = 85, CC#32 = 32

* *The Performance with * mark to the head of its name uses the Preset Samples.*
Therefore, in order to play this Performance, the Preset Samples need to be loaded to Fantom-Xa.

PR-A (Preset A Group)

CC#0 = 87, CC#32 = 64

No.	Name	Voices	Category
001	So true...	2	AC.PIANO
002	ConcertPiano	3	AC.PIANO
003	Warm Piano	2	AC.PIANO
004	Warm Pad Pno	4	AC.PIANO
005	Warm Str Pno	6	AC.PIANO
006	BealeSt Walk	4	AC.PIANO
007	Rapsody	7	AC.PIANO
008	JD-800 Piano	1	AC.PIANO
009	SA Dance Pno	2	AC.PIANO
010	FS E-Grand	4	AC.PIANO
011	FS Blend Pno	5	AC.PIANO
012	LA Piano	3	AC.PIANO
013	FS 70'EP	5	EL.PIANO
014	StageEP Trem	2	EL.PIANO
015	Back2the60s	2	EL.PIANO
016	Tine EP	1	EL.PIANO
017	LEO EP	4	EL.PIANO
018	LonesomeRoad	2	EL.PIANO
019	Age'n'Tines	2	EL.PIANO
020	Brill TremEP	2	EL.PIANO
021	Crystal EP	2	EL.PIANO
022	Celestial EP	4	EL.PIANO
023	Spirit Tines	3	EL.PIANO
024	Psycho EP	4	EL.PIANO
025	Mk2 Stg phsr	3	EL.PIANO
026	SA Stacks	5	EL.PIANO
027	Backing PhEP	2	EL.PIANO
028	Balladeer	3	EL.PIANO
029	Remember	2	EL.PIANO
030	FS Wurly	2	EL.PIANO
031	Wurly Trem	3	EL.PIANO
032	Super Wurly	3	EL.PIANO
033	Pulse EPno	3	EL.PIANO
034	Fonky Fonky	2	EL.PIANO
035	FM EP	5	EL.PIANO
036	FM-777	5	EL.PIANO
037	FM EPad	3	EL.PIANO
038	D6 Clavi	3	KEYBOARDS
039	Cutter Clavi	2	KEYBOARDS
040	FS Clavi	2	KEYBOARDS
041	Funky D	2	KEYBOARDS
042	Phase Clavi	2	KEYBOARDS
043	BPF Clavi Ph	2	KEYBOARDS
044	Pulse Clavi	2	KEYBOARDS
045	Analog Clavi	1	KEYBOARDS
046	Reso Clavi	2	KEYBOARDS
047	Harpsy Clavi	2	KEYBOARDS
048	FS Harpsi	4	KEYBOARDS
049	Amadeus	8	KEYBOARDS
050	FS Celesta	1	KEYBOARDS
051	FS Glocken	1	BELL
052	Music Bells	2	BELL
053	FS Musicbox	1	BELL
054	MuBox Pad	4	BELL
055	Kalimbells	2	BELL
056	Himalaya Ice	2	BELL
057	Dreaming Box	4	BELL
058	Step Ice	4	BELL
059	FS Bell 1	4	BELL
060	FS Bell 2	2	BELL
061	Candy Bell	2	BELL
062	FS Chime	1	BELL
063	Bell Ring	4	BELL
064	Tubular Bell	1	BELL
065	5th Key	2	BELL
066	Vibrations	2	MALLET
067	FS Vibe	1	MALLET
068	FS Marimba	1	MALLET
069	FS Xylo	1	MALLET
070	Ethno Keys	2	MALLET
071	Synergy MLT	2	MALLET
072	Steel Drums	2	MALLET
073	Xylosizer	2	MALLET
074	Toy Box	3	MALLET
075	FullDraw Org	3	ORGAN
076	StakDraw Org	4	ORGAN
077	FullStop Org	3	ORGAN
078	FS Perc Org	4	ORGAN
079	Euro Organ	2	ORGAN
080	Perky Organ	1	ORGAN
081	LoFi PercOrg	1	ORGAN
082	Rochno Org	4	ORGAN
083	R&B Organ 1	2	ORGAN
084	R&B Organ 2	4	ORGAN
085	Zepix Organ	4	ORGAN
086	Peep Durple	5	ORGAN
087	FS Dist Bee	1	ORGAN
088	60's Org 1	2	ORGAN
089	60's Org 2	2	ORGAN
090	FS SoapOpera	1	ORGAN
091	Chapel Organ	2	ORGAN
092	Grand Pipe	3	ORGAN
093	Masked Opera	6	ORGAN
094	Pipe Org/Mod	6	ORGAN
095	Vodkakordion	3	ACCORDION
096	Squeeze Me!	2	ACCORDION
097	Guinguette	3	ACCORDION
098	Harmonderca	2	HARMONICA
099	BluesHrp V/S	1	HARMONICA
100	Green Bullet	2	HARMONICA
101	SoftNyln Gtr	2	AC.GUITAR
102	FS Nylon Gt	2	AC.GUITAR
103	Wet Nyln Gtr	3	AC.GUITAR
104	Pre Mass Hum	4	AC.GUITAR
105	Thick Steel	2	AC.GUITAR
106	Uncle Martin	2	AC.GUITAR
107	Wide Ac Gtr	4	AC.GUITAR
108	Comp Stl Gtr	2	AC.GUITAR
109	Stl Gtr Duo	2	AC.GUITAR
110	FS 12str Gtr	3	AC.GUITAR
111	So good !	2	AC.GUITAR
112	Muted Gtr Pk	2	EL.GUITAR
113	StratSeq'nce	3	EL.GUITAR
114	Fixx it	1	EL.GUITAR
115	Jazz Guitar	1	EL.GUITAR
116	DynoJazz Gtr	1	EL.GUITAR
117	Wet TC	1	EL.GUITAR
118	Clean Gtr	1	EL.GUITAR
119	Crimson Gtr	2	EL.GUITAR
120	Touchee Funk	2	EL.GUITAR
121	Plug n' Gig	1	EL.GUITAR
122	Kinda Kurt	2	EL.GUITAR
123	Nice Oct Gtr	2	EL.GUITAR
124	Strat Gtr	1	EL.GUITAR
125	JC Strat Bdy	2	EL.GUITAR
126	Twin StratsB	2	EL.GUITAR
127	BluNoteStrat	1	EL.GUITAR
128	FS Funk Gtr	2	EL.GUITAR

PR-B (Preset B Group)

CC#0 = 87, CC#32 = 65

No.	Name	Voices	Category
001	GK Dubguitar	4	EL.GUITAR
002	& Scratchee	4	EL.GUITAR
003	Touch Drive	1	DIST.GUITAR
004	FS Chunk	4	DIST.GUITAR
005	Trem-o-Vibe	2	DIST.GUITAR
006	Nice Dist Gt	1	DIST.GUITAR
007	LP Dist	2	DIST.GUITAR
008	Hurting Gtr	3	DIST.GUITAR
009	Searing COSM	2	DIST.GUITAR
010	FS Loud Gtr	3	DIST.GUITAR
011	FS Plugged!!	1	DIST.GUITAR
012	Punker 1	2	DIST.GUITAR
013	FS PowerChd	2	DIST.GUITAR
014	Punker 2	2	DIST.GUITAR
015	Ulti Ac Bass	2	BASS
016	Downright Bs	3	BASS
017	Ultimo Bass	3	BASS
018	Roomy Bass	2	BASS
019	Comp'd JBass	2	BASS
020	FingerMaster	2	BASS
021	CompressBass	2	BASS
022	All Round Bs	2	BASS
023	R&B Bs/Slide	2	BASS
024	Thumb Up!	1	BASS
025	Tubby Mute	2	BASS
026	Chicken Bass	3	BASS
027	Snug Bass	2	BASS
028	Return2Base!	1	BASS
029	A Big Pick	3	BASS
030	Basement	1	BASS
031	FS Fretnot 1	2	BASS
032	FS Fretnot 2	3	BASS
033	RichFretless	2	BASS
034	Got Pop?	1	BASS
035	JBass v/Thmb	2	BASS
036	FS Slap Bass	2	BASS
037	LEO Bass	1	BASS
038	Smooth Bass	2	SYNTH BASS
039	MC-404 Bass	2	SYNTH BASS
040	SH-101 Bs 1	2	SYNTH BASS
041	FS Syn Bass1	3	SYNTH BASS
042	Electro Rubb	2	SYNTH BASS
043	R&B Bass 1	2	SYNTH BASS
044	Enorjizor	2	SYNTH BASS
045	LowFat Bass	3	SYNTH BASS
046	Doze Bass	1	SYNTH BASS
047	FS Flat Bs	3	SYNTH BASS
048	Saw&MG Bass	4	SYNTH BASS
049	R&B Bass 2	1	SYNTH BASS
050	Foundation	2	SYNTH BASS
051	R&B Bass 3	2	SYNTH BASS
052	HipHop Bs 1	2	SYNTH BASS
053	HipHop Bs 2	3	SYNTH BASS
054	Solid Goa	1	SYNTH BASS
055	ResoSyn Bs 1	2	SYNTH BASS
056	SH-1 Bass	2	SYNTH BASS
057	SH-101 Bs 2	2	SYNTH BASS
058	FS Syn Bass2	2	SYNTH BASS
059	Poly Bass	1	SYNTH BASS
060	Punch MG 1	2	SYNTH BASS
061	Gashed Bass	2	SYNTH BASS
062	Q Bass	3	SYNTH BASS
063	FS Rubber Bs	3	SYNTH BASS
064	ResoSyn Bs 2	2	SYNTH BASS
065	Super-G DX	3	SYNTH BASS
066	Punch MG 2	2	SYNTH BASS
067	Kickin' Bass	2	SYNTH BASS
068	OilDrum Bass	3	SYNTH BASS
069	Glide-iator	2	SYNTH BASS
070	MG+SubOsc Bs	2	SYNTH BASS
071	FS Unison Bs	2	SYNTH BASS
072	TexturedBusy	3	SYNTH BASS
073	Detune Bass	2	SYNTH BASS
074	Lo Bass	3	SYNTH BASS
075	SQ Pan	2	SYNTH BASS
076	FS GarageBs1	3	SYNTH BASS
077	FS GarageBs2	2	SYNTH BASS
078	Sub Sonic	4	SYNTH BASS
079	FS Jungle Bs	2	SYNTH BASS
080	R&B Bass 4	1	SYNTH BASS
081	Beepin Bass	2	SYNTH BASS
082	MC-TB Bass	2	SYNTH BASS
083	Acdg Bass	2	SYNTH BASS
084	Loco Voco	2	SYNTH BASS
085	TBasic	1	SYNTH BASS
086	Unplug it!	1	SYNTH BASS
087	V.Form Bass	1	SYNTH BASS
088	S&H Bass	3	SYNTH BASS
089	Destroyed Bs	2	SYNTH BASS
090	FS Acid Bs	2	SYNTH BASS
091	Lo-Fi TB	1	SYNTH BASS
092	Violin	1	STRINGS
093	Viola	3	STRINGS
094	Cello	1	STRINGS
095	Contrabass	4	STRINGS
096	Dolce Qrt	2	STRINGS
097	Chamber Str	3	STRINGS
098	Small Str	7	STRINGS
099	Studio Sect.	4	STRINGS
100	Stringz 101	2	STRINGS
101	Crossed Bows	5	STRINGS
102	FS Strings	8	STRINGS
103	2-way Sect.	2	STRINGS
104	Warm Strings	5	STRINGS
105	Stacc mp Str	4	STRINGS
106	Magnolia Str	3	STRINGS
107	Movie Scene	4	STRINGS
108	Gang Strangs	6	STRINGS
109	Clustered!?!	8	STRINGS
110	DramaSect/sw	4	STRINGS
111	DelicatePizz	4	STRINGS
112	Vls PizzHall	4	STRINGS
113	Orch Pizz	4	STRINGS
114	Wind & Str 1	7	ORCHESTRA
115	Wind & Str 2	5	ORCHESTRA
116	Farewell	6	ORCHESTRA
117	Orch & Horns	5	ORCHESTRA
118	Soft Orch 1	4	ORCHESTRA
119	Soft Orch 2	7	ORCHESTRA
120	Henry IX	4	ORCHESTRA
121	Ending Scene	4	ORCHESTRA
122	Good Old Day	3	WIND
123	FS WindWood	3	WIND
124	Clarence.net	2	WIND
125	FS Oboe	1	WIND
126	Hall Oboe	1	WIND
127	English Horn	1	WIND
128	Bassoon	1	WIND

PR-C (Preset C Group)

CC#0 = 87, CC#32 = 66

No.	Name	Voices	Category
001	FS Flute	2	FLUTE
002	Atk Flute	2	FLUTE
003	Piccolo	2	FLUTE
004	Andes Mood	1	FLUTE
005	Pan Pipes	2	FLUTE
006	Solo Tp	2	AC.BRASS
007	Horn Chops	2	AC.BRASS
008	Flugel Horn	1	AC.BRASS
009	Spit Flugel	3	AC.BRASS
010	Mute Tp /Mod	3	AC.BRASS
011	Harmon Mute	1	AC.BRASS
012	Soft Tb	2	AC.BRASS
013	Solo Tb	1	AC.BRASS
014	Solo Bone	2	AC.BRASS
015	Grande Tuba	2	AC.BRASS
016	FS Tuba	1	AC.BRASS
017	StackTp Sect	4	AC.BRASS
018	Tb Section	5	AC.BRASS
019	TpTb Sect.	2	AC.BRASS
020	FS Brass	7	AC.BRASS
021	DynamicBrass	8	AC.BRASS
022	Tpts & Tmbs	2	AC.BRASS
023	Brass & Sax	5	AC.BRASS
024	BrassPartOut	6	AC.BRASS
025	Simple Tutti	2	AC.BRASS
026	Full sForza	4	AC.BRASS
027	F.Horns Sect	3	AC.BRASS
028	Stereo Brass	4	AC.BRASS
029	Brass Fall	2	AC.BRASS
030	FS Saw Brass	4	SYNTH BRASS
031	Wide SynBrss	2	SYNTH BRASS
032	DetuneSawBrs	2	SYNTH BRASS
033	J-Pop Brass	6	SYNTH BRASS
034	Brash!	4	SYNTH BRASS
035	Jump For KY	3	SYNTH BRASS
036	Neo SuperBrs	4	SYNTH BRASS
037	SoftSynBrass	2	SYNTH BRASS
038	Silky JP	2	SYNTH BRASS
039	Silk Brs Pad	1	SYNTH BRASS
040	FatSynBrass	4	SYNTH BRASS
041	Soprano Sax	1	SAX
042	Solo Sop Sax	1	SAX
043	Alto mp	1	SAX
044	Alto Sax	1	SAX
045	Solo AltoSax	1	SAX
046	AltoLead Sax	1	SAX
047	Tenor Sax	2	SAX
048	Fat TenorSax	3	SAX
049	Baritone Sax	1	SAX
050	Sax Sect. 1	3	SAX
051	Sax Sect. 2	4	SAX
052	Horny Sax	2	SAX
053	R&B TriLead	1	SOFT LEAD
054	PeakArpSine	1	SOFT LEAD
055	Theramax	1	SOFT LEAD
056	FS Sqr Lead	2	SOFT LEAD
057	Dawn Of Pan	4	SOFT LEAD
058	Sqr Diamond	2	SOFT LEAD
059	FS SoftLead	2	SOFT LEAD
060	Mid Saw Ld	4	SOFT LEAD
061	FS ResoLead	3	SOFT LEAD
062	Dig-n-Duke	2	SOFT LEAD
063	Modulated Ld	1	SOFT LEAD
064	Waspy Lead	1	SOFT LEAD
065	Mew Lead	1	SOFT LEAD
066	Violin Lead	2	SOFT LEAD
067	Oscillo Lead	2	SOFT LEAD
068	JP Saw Lead	2	SOFT LEAD
069	MG Sqr Lead	2	SOFT LEAD
070	Tristar	2	SOFT LEAD
071	Mod Lead	4	SOFT LEAD
072	Digital Ld 1	3	SOFT LEAD
073	Chubby Lead	2	SOFT LEAD
074	Sneaky Leady	2	SOFT LEAD
075	SoloNzPeaker	1	SOFT LEAD
076	Clone Zone	2	SOFT LEAD
077	Legato Tkno	1	SOFT LEAD
078	DC Triangle	2	HARD LEAD
079	Sqr-Seqence	1	HARD LEAD
080	Griggley	2	HARD LEAD
081	Pure Square	2	HARD LEAD
082	Legato Saw	2	HARD LEAD
083	Lone Prophat	1	HARD LEAD
084	Porta SoloLd	2	HARD LEAD
085	FS Saw Ld 1	2	HARD LEAD
086	FS Saw Ld 2	2	HARD LEAD
087	Wind Syn Ld	2	HARD LEAD
088	Dual Profs	2	HARD LEAD
089	Gwyo Press	2	HARD LEAD
090	Q DualSaws	2	HARD LEAD
091	Mogulator Ld	2	HARD LEAD
092	DirtyVoltage	2	HARD LEAD
093	Clean?	2	HARD LEAD
094	Distortion	4	HARD LEAD
095	FS Syn Ld	2	HARD LEAD
096	SynLead 0322	2	HARD LEAD
097	Digital Ld 2	3	HARD LEAD
098	X-Sink Delay	3	HARD LEAD
099	Noized Lead	3	HARD LEAD
100	Space Lead	3	HARD LEAD
101	Destroyed Ld	2	HARD LEAD
102	SyncModulate	3	HARD LEAD
103	Sync Tank	2	HARD LEAD
104	Squareheads	2	HARD LEAD
105	Distorted MG	1	HARD LEAD
106	SonicVampire	2	HARD LEAD
107	Blue Meanie	2	HARD LEAD
108	Defcon	2	HARD LEAD
109	Stimulation	4	HARD LEAD
110	Sub Hit	3	HIT&STAB
111	Blue Ice	2	HIT&STAB
112	.16 Orch	2	HIT&STAB
113	In da Cave	2	HIT&STAB
114	BlastfrmPast	2	HIT&STAB
115	Smear Hit 1	2	HIT&STAB
116	Smear Hit 2	2	HIT&STAB
117	Good Old Hit	4	HIT&STAB
118	Mix Hit 1	4	HIT&STAB
119	Philly Hit	1	HIT&STAB
120	Mojo Man	2	HIT&STAB
121	Cheezy Movie	4	HIT&STAB
122	Mix Hit 2	4	HIT&STAB
123	Lo-Fi Hit	4	HIT&STAB
124	2ble Action	2	HIT&STAB
125	Funk Chank	2	HIT&STAB
126	Venus	2	HIT&STAB
127	AluminmWires	3	TECHNO SYNTH
128	Raven Chord	4	TECHNO SYNTH

PR-D (Preset D Group)

CC#0 = 87, CC#32 = 67

No.	Name	Voices	Category
001	HPF Sweep	2	TECHNO SYNTH
002	Moon Synth	2	TECHNO SYNTH
003	DelyResoSaws	2	TECHNO SYNTH
004	R-Trance	7	TECHNO SYNTH
005	Alfa Retro	3	TECHNO SYNTH
006	Nu Hoover	4	TECHNO SYNTH
007	Hoovercraft	4	TECHNO SYNTH
008	Braatz...	6	TECHNO SYNTH
009	AllinOneRiff	7	TECHNO SYNTH
010	YZ Again	7	TECHNO SYNTH
011	Flazzy Lead	8	TECHNO SYNTH
012	Coffee Bee	2	TECHNO SYNTH
013	Sweet House	4	TECHNO SYNTH
014	Alien Bubble	1	TECHNO SYNTH
015	LowFreqHit	3	TECHNO SYNTH
016	Loonacy	6	TECHNO SYNTH
017	Periscope	4	TECHNO SYNTH
018	Electrostars	4	TECHNO SYNTH
019	Going Mad!	4	TECHNO SYNTH
020	LoFiSequence	2	TECHNO SYNTH
021	DreamInColor	3	TECHNO SYNTH
022	MelodicDrums	2	TECHNO SYNTH
023	Techno Snips	2	TECHNO SYNTH
024	TB Wah	1	TECHNO SYNTH
025	Waving TB303	3	TECHNO SYNTH
026	Digi Seq	3	TECHNO SYNTH
027	Seq Saw	1	TECHNO SYNTH
028	Reso Seq Saw	1	TECHNO SYNTH
029	DetuneSeqSaw	2	TECHNO SYNTH
030	Technotribe	2	TECHNO SYNTH
031	MetalVoxBox	4	TECHNO SYNTH
032	Teethy Grit	3	TECHNO SYNTH
033	Repertition	4	TECHNO SYNTH
034	Jucy Saw	3	OTHER SYNTH
035	Cue Tip	1	OTHER SYNTH
036	TB-Sequence	1	OTHER SYNTH
037	Europe Xpres	2	OTHER SYNTH
038	Squeepy	1	OTHER SYNTH
039	Atmorave	4	OTHER SYNTH
040	DOC Stack	2	OTHER SYNTH
041	Sweep Lead	2	OTHER SYNTH
042	Digitaless	2	OTHER SYNTH
043	Flip Pad	3	OTHER SYNTH
044	Short Detune	2	OTHER SYNTH
045	forSequence	2	OTHER SYNTH
046	Memory Pluck	2	OTHER SYNTH
047	Metalic Bass	2	OTHER SYNTH
048	Aqua	2	OTHER SYNTH
049	Big Planet	2	OTHER SYNTH
050	Wet Atax	2	OTHER SYNTH
051	Houze Clavi	2	OTHER SYNTH
052	SuperSawSlow	2	OTHER SYNTH
053	TranceSaws	4	OTHER SYNTH
054	Trancy Synth	2	OTHER SYNTH
055	Saw Stack	2	OTHER SYNTH
056	Frgile Saws	2	OTHER SYNTH
057	Steamed Sawz	2	OTHER SYNTH
058	RAVtune	2	OTHER SYNTH
059	Bustranza	2	OTHER SYNTH
060	AftTch Ji-n	2	OTHER SYNTH
061	JP OctAttack	2	OTHER SYNTH
062	Oct Unison	6	OTHER SYNTH
063	Xtatic	4	OTHER SYNTH
064	Dirty Combo	2	OTHER SYNTH
065	FM's Attack	3	OTHER SYNTH
066	Impression	4	OTHER SYNTH
067	Digi-vox Syn	1	OTHER SYNTH
068	Fairy Factor	6	OTHER SYNTH
069	Tempest	2	OTHER SYNTH
070	X-Racer	2	OTHER SYNTH
071	TB Booster	2	OTHER SYNTH
072	Syn-Orch/Mod	6	OTHER SYNTH
073	Pressyn	2	OTHER SYNTH
074	High Five	2	OTHER SYNTH
075	4DaCommonMan	4	OTHER SYNTH
076	Orgaenia	5	OTHER SYNTH
077	Sleeper	4	OTHER SYNTH
078	Sugar Synth	5	OTHER SYNTH
079	Ice Palace	4	OTHER SYNTH
080	Story Harp	7	OTHER SYNTH
081	LostParadise	5	OTHER SYNTH
082	Magnetic 5th	2	OTHER SYNTH
083	Jazz Doos	4	VOX
084	Beat Vox	1	VOX
085	Scat Beats	1	VOX
086	Choir Aahs 1	4	VOX
087	Choir Aahs 2	4	VOX
088	ChoirOoh/Aft	4	VOX
089	Angels Choir	4	VOX
090	Angelique	4	VOX
091	Gospel Oohs	2	VOX
092	Uhmmm	8	VOX
093	Aah Vox	2	VOX
094	Morning Star	3	VOX
095	Syn Opera	4	VOX
096	BeautifulOne	4	VOX
097	Ooze	2	VOX
098	Aerial Choir	4	VOX
099	3D Vox	3	VOX
100	FS Sqr Pad	4	SOFT PAD
101	FS Hollow	4	SOFT PAD
102	Silk Pad	3	SOFT PAD
103	WarmReso Pad	2	SOFT PAD
104	FS Soft Pad	3	SOFT PAD
105	Soft Breeze	2	SOFT PAD
106	JP Strings 1	3	SOFT PAD
107	JP Strings 2	5	SOFT PAD
108	FS Syn Str	5	SOFT PAD
109	Syn Strings	2	SOFT PAD
110	OB Slow Str	2	SOFT PAD
111	Super SynStr	2	SOFT PAD
112	Strings Pad	2	SOFT PAD
113	R&B SoftPad	2	SOFT PAD
114	Reso Pad	3	SOFT PAD
115	Phat Pad	2	SOFT PAD
116	FS PhaserPad	2	SOFT PAD
117	Mystic Str	5	SOFT PAD
118	Glass Organ	3	SOFT PAD
119	Wind Pad	4	SOFT PAD
120	Combination	4	SOFT PAD
121	HumanKindnes	4	SOFT PAD
122	Atmospherics	2	SOFT PAD
123	Terra Nostra	8	SOFT PAD
124	OB Aaahs	4	SOFT PAD
125	Vulcano Pad	8	SOFT PAD
126	Cloud #9	3	SOFT PAD
127	Lostscapes	2	SOFT PAD
128	Organic Pad	3	SOFT PAD

PR-E (Preset E Group)

CC#0 = 87, CC#32 = 68

No.	Name	Voices	Category
001	Digital Aahs	3	SOFT PAD
002	FreezinNight	5	SOFT PAD
003	FS MovinPad	8	SOFT PAD
004	Seq-Pad 1	8	SOFT PAD
005	Digi-Swell	3	BRIGHT PAD
006	Stringship	4	BRIGHT PAD
007	SaturnHolida	2	BRIGHT PAD
008	India Garden	6	BRIGHT PAD
009	OB Rezo Pad	3	BRIGHT PAD
010	Sonic Surfer	2	BRIGHT PAD
011	2 Point 2	7	BRIGHT PAD
012	2.2 Pad	7	BRIGHT PAD
013	New Year Day	4	BRIGHT PAD
014	Mod Dare	4	BRIGHT PAD
015	Neuro-Drone	7	BRIGHT PAD
016	In The Pass	3	BRIGHT PAD
017	Polar Night	4	BRIGHT PAD
018	Electric Pad	3	BRIGHT PAD
019	MistOver5ths	4	BRIGHT PAD
020	Voyager	4	BRIGHT PAD
021	Cosmic Rays	4	BRIGHT PAD
022	Gritty Pad	1	BRIGHT PAD
023	Distant Sun	4	BRIGHT PAD
024	Filmscape	5	BRIGHT PAD
025	BillionStars	4	BRIGHT PAD
026	Sand Pad	2	BRIGHT PAD
027	Fat Stacks	4	BRIGHT PAD
028	ReverseSweep	2	BRIGHT PAD
029	HugeSoundMod	4	BRIGHT PAD
030	Metal Swell	5	BRIGHT PAD
031	ShapeURMusic	5	PULSATING
032	Synth Force	4	PULSATING
033	Trance Split	2	PULSATING
034	Step Trance	1	PULSATING
035	Chop Synth	2	PULSATING
036	Euro Teuro	6	PULSATING
037	Auto Trance	2	PULSATING
038	Eureggae	1	PULSATING
039	Sorry4theDLY	1	PULSATING
040	Beat Pad	3	PULSATING
041	FS ResoStep	5	PULSATING
042	TMT Seq Pad	4	PULSATING
043	ZipDoggyDoDa	7	PULSATING
044	ForYourBreak	4	PULSATING
045	HPF Slicer	3	PULSATING
046	DarknessSide	6	PULSATING
047	Sliced Choir	6	PULSATING
048	Digi-Doo	2	PULSATING
049	PanningFrmnt	2	PULSATING
050	Dirty Beat	7	PULSATING
051	Hellrazor	3	PULSATING
052	Electrons	1	PULSATING
053	Protons	2	PULSATING
054	FS Alfa Rave	5	PULSATING
055	Brisk Vortex	3	PULSATING
056	FS Throbulax	2	PULSATING
057	FS Lonizer	4	PULSATING
058	FS Strobe	4	PULSATING
059	VirtualHuman	4	PULSATING
060	FS Line	1	PULSATING
061	StepPitShift	2	PULSATING
062	Sever	7	PULSATING
063	Pad Pulses	3	PULSATING
064	Dub Tales	2	PULSATING
065	Seq-Pad 2	8	PULSATING
066	Nice Kalimba	1	PLUCKED
067	Quiet River	4	PLUCKED
068	Teky Drop	4	PLUCKED
069	Pat is away	5	PLUCKED
070	FS Sitar 1	4	PLUCKED
071	FS Sitar 2	5	PLUCKED
072	Sitar on C	6	PLUCKED
073	Sitar Baby	1	PLUCKED
074	EasternDlite	2	PLUCKED
075	Elec Sitar	3	PLUCKED
076	Neo Sitar	2	PLUCKED
077	Bosporus	3	PLUCKED
078	Santur Stack	4	PLUCKED
079	Aerial Harp	2	PLUCKED
080	Harpiness	2	PLUCKED
081	TroubadorEns	4	PLUCKED
082	Jamisen	2	PLUCKED
083	Koto	8	PLUCKED
084	Monsoon	4	PLUCKED
085	Bend Koto	2	PLUCKED
086	LongDistance	1	ETHNIC
087	Ambi Shaku	3	ETHNIC
088	FS PipeDream	4	ETHNIC
089	FS Lochscape	2	ETHNIC
090	FS Far East	4	ETHNIC
091	Banjo	2	FRETTED
092	Breath Slice	5	SYNTH FX
093	Lazer Points	2	SYNTH FX
094	Chaos 2003	4	SYNTH FX
095	SoundOnSound	1	SYNTH FX
096	Low Beat-S	5	SYNTH FX
097	Control Room	4	SYNTH FX
098	FS Try This!	3	SYNTH FX
099	OutOf sortz	5	SYNTH FX
100	Seq	4	SYNTH FX
101	Scatter	7	SYNTH FX
102	WaitnOutside	2	SYNTH FX
103	Ambience	3	SYNTH FX
104	Fantom Noise	4	SYNTH FX
105	Breath Echo	1	SYNTH FX
106	SoundStrange	3	SYNTH FX
107	Cosmic Pulse	5	SYNTH FX
108	Faked Piano	4	SYNTH FX
109	Tubulence	3	SYNTH FX
110	South Pole	2	SYNTH FX
111	FS Crystal	2	SYNTH FX
112	ResoSweep Dn	1	SYNTH FX
113	Zap B3 & C4	1	SYNTH FX
114	PolySweep Nz	4	SYNTH FX
115	New Planetz	4	SYNTH FX
116	Strange Land	6	SYNTH FX
117	Trancer	4	SYNTH FX
118	S&H Voc	2	SYNTH FX
119	12th Planet	2	SYNTH FX
120	Ambidextrous	2	SOUND FX
121	En-co-re	4	SOUND FX
122	Mobile Phone	1	SOUND FX
123	Beat (C4)	4	BEAT&GROOVE
124	StepLFO Ens	4	BEAT&GROOVE
125	Timpani+Low	4	PERCUSSION
126	Timpani Roll	2	PERCUSSION
127	Bass Drum	4	PERCUSSION
128	Techno Craft	3	COMBINATION

PR-F (Preset F Group)

CC#0 = 87, CC#32 = 69

No.	Name	Voices	Category
001	A'live Piano	2	AC.PIANO
002	SoundCheck	2	AC.PIANO
003	Imagination	4	AC.PIANO
004	Stage EP	5	EL.PIANO
005	Curly Wurly	2	EL.PIANO
006	EP Belle	3	EL.PIANO
007	AMP EP	5	EL.PIANO
008	Over-D6	3	KEYBOARDS
009	CoupleHarpsi	7	KEYBOARDS
010	HimalayaThaw	4	BELL
011	AirPluck	4	MALLET
012	X Perc Organ	3	ORGAN
013	Latin Gtr	1	AC.GUITAR
014	Mystic Gtr	2	EL.GUITAR
015	FleXa Guitar	4	EL.GUITAR
016	Rockin' Dly	3	DIST.GUITAR
017	NewAge Frtls	3	BASS
018	Nu Bace	2	SYNTH BASS
019	Da Chronic	2	SYNTH BASS
020	Mini Like!	2	SYNTH BASS
021	Nu RnB Bass	2	SYNTH BASS
022	Nu Saw Bass	3	SYNTH BASS
023	Beambreaker	2	SYNTH BASS
024	Glitch Bass	4	SYNTH BASS
025	Saturator	2	SYNTH BASS
026	SuBASSembly	3	SYNTH BASS
027	Vintage Sub	3	SYNTH BASS
028	Magestic Str	8	STRINGS
029	Mellow Tron	3	STRINGS
030	Orange Skin	4	HIT&STAB
031	Disto Stab !	5	HIT&STAB
032	Mod Chord	2	HIT&STAB
033	C. McFizzy	4	WIND
034	Angel Pipes	2	FLUTE
035	HimalayaPipe	4	FLUTE
036	Brass Fall /	2	AC.BRASS
037	VangJarris	1	SYNTH BRASS
038	X-Saw Brass1	2	SYNTH BRASS
039	Bend SynBrs	4	SYNTH BRASS
040	PolyFlagship	2	SYNTH BRASS
041	In Canada	3	HARD LEAD
042	Digital Edge	2	HARD LEAD
043	Classic Lead	4	HARD LEAD
044	MODified Ld	2	HARD LEAD
045	Square Times	4	HARD LEAD
046	Squarely	2	HARD LEAD
047	Unleaded	3	HARD LEAD
048	Hot Coffee	2	HARD LEAD
049	Rezo Sync	3	HARD LEAD
050	Bon Voyage	3	HARD LEAD
051	Epic Lead	2	HARD LEAD
052	Crumble Syn	2	HARD LEAD
053	Mini Growl	2	SOFT LEAD
054	Eye see DC	2	SOFT LEAD
055	Myxlptylk	2	TECHNO SYNTH
056	Killerbeez	3	TECHNO SYNTH
057	Alpha Hoover	1	TECHNO SYNTH
058	No Left Turn	5	TECHNO SYNTH
059	Bend'nMod Me	5	TECHNO SYNTH
060	Final Run	6	TECHNO SYNTH
061	Morpher	8	TECHNO SYNTH
062	Trancepire	1	TECHNO SYNTH
063	Tranceformer	1	TECHNO SYNTH
064	Projector	1	TECHNO SYNTH
065	Shroomy	3	TECHNO SYNTH
066	Mad Dentist	2	TECHNO SYNTH
067	In-dee-yah	3	TECHNO SYNTH
068	Autolicker	3	TECHNO SYNTH
069	Xadecimal	4	PULSATING
070	Regenerator	2	PULSATING
071	Are U ready?	4	PULSATING
072	Mr. 4ier	3	PULSATING
073	InverseSquar	4	PULSATING
074	ARP x Race	1	PULSATING
075	Tumblerz	2	PULSATING
076	FX World	2	PULSATING
077	Space Ocean	4	PULSATING
078	Strobe X	5	PULSATING
079	ThujonGroove	2	PULSATING
080	Denial River	6	PULSATING
081	Newcomers	4	PULSATING
082	Ourobotos	2	PULSATING
083	Saw Dogs	1	PULSATING
084	SpacePulse	4	PULSATING
085	Dancefloor	4	PULSATING
086	Up For Air	1	PULSATING
087	Elliptical	3	PULSATING
088	H-Pathetique	1	PULSATING
089	Vocastic	8	PULSATING
090	Auto Mouths	3	PULSATING
091	Strobot	2	PULSATING
092	Shangri-La	5	SYNTH FX
093	SolarPleXus	2	SYNTH FX
094	Firefly	2	SYNTH FX
095	Neverville	6	SYNTH FX
096	CerealKiller	1	SYNTH FX
097	FaceOfMars	3	SYNTH FX
098	Heatstroke	2	SYNTH FX
099	Oblivion	3	SYNTH FX
100	Bending Logo	8	SYNTH FX
101	ResoSweep Up	1	SYNTH FX
102	Potted Pixie	1	OTHER SYNTH
103	DigimaX	2	OTHER SYNTH
104	Trancy X	4	OTHER SYNTH
105	Squeeze Toyz	1	OTHER SYNTH
106	Polar Morn	4	BRIGHT PAD
107	Liquid Air	4	BRIGHT PAD
108	Strangers	4	BRIGHT PAD
109	XA:YTEM	4	BRIGHT PAD
110	Angel Breath	4	BRIGHT PAD
111	Magic Wave	2	BRIGHT PAD
112	Life-on	4	BRIGHT PAD
113	InfinitePhsr	6	BRIGHT PAD
114	TrnsSweepPad	6	SOFT PAD
115	Flange Dream	4	SOFT PAD
116	Analog Times	4	SOFT PAD
117	Day After...	3	SOFT PAD
118	Chariots	4	SOFT PAD
119	Nu Epic Pad	2	SOFT PAD
120	As It Is	5	SOFT PAD
121	Sad ceremony	8	VOX
122	xcultural	3	ETHNIC
123	SaraswatiRvr	3	PLUCKED
124	AndreaIsBack	4	PLUCKED
125	Naughty Bits	4	BEAT&GROOVE
126	MagmaBubble	4	BEAT&GROOVE
127	Krafty	3	BEAT&GROOVE
128	Dusty Sndtrk	4	COMBINATION

GM (GM2 Group)

Voice: number of voice LSB: Bank Select LSB (CC#32), MSB (CC#0) is all 121 PC: Program Change Number

No.	Name	Voice	LSB	PC
001	Piano 1	4	0	1
002	Piano 1w	4	1	1
003	European Pf	4	2	1
004	Piano 2	4	0	2
005	Piano 2w	4	1	2
006	Piano 3	2	0	3
007	Piano 3w	2	1	3
008	Honky-tonk	2	0	4
009	Honky-tonk 2	2	1	4
010	E.Piano 1	3	0	5
011	St.Soft EP	3	1	5
012	FM+SA EP	2	2	5
013	60's EP	2	3	5
014	E.Piano 2	2	0	6
015	Detuned EP 2	2	1	6
016	St.FM EP	3	2	6
017	EP Legend	2	3	6
018	EP Phase	2	4	6
019	Harpsichord	1	0	7
020	Coupled Hps.	2	1	7
021	Harpsi.w	1	2	7
022	Harpsi.o	2	3	7
023	Clav.	1	0	8
024	Pulse Clav	1	1	8
025	Celesta	1	0	9
026	Glockenspiel	1	0	10
027	Music Box	1	0	11
028	Vibraphone	2	0	12
029	Vibraphone w	2	1	12
030	Marimba	1	0	13
031	Marimba w	1	1	13
032	Xylophone	1	0	14
033	Tubular-bell	1	0	15
034	Church Bell	1	1	15
035	Carillon	1	2	15
036	Santur	1	0	16
037	Organ 1	2	0	17
038	Trem. Organ	2	1	17
039	60's Organ 1	1	2	17
040	70's E.Organ	2	3	17
041	Organ 2	2	0	18
042	Chorus Or.2	2	1	18
043	Perc. Organ	2	2	18
044	Organ 3	3	0	19
045	Church Org.1	1	0	20
046	Church Org.2	2	1	20
047	Church Org.3	2	2	20
048	Reed Organ	2	0	21
049	Puff Organ	1	1	21
050	Accordion Fr	1	0	22
051	Accordion It	2	1	22
052	Harmonica	1	0	23
053	Bandoneon	2	0	24
054	Nylon-str.Gt	1	0	25
055	Ukulele	2	1	25
056	Nylon Gt.o	2	2	25
057	Nylon Gt.2	2	3	25
058	Steel-str.Gt	1	0	26
059	12-str.Gt	2	1	26
060	Mandolin	2	2	26
061	Steel + Body	2	3	26
062	Jazz Gt.	1	0	27
063	Pedal Steel	1	1	27
064	Clean Gt.	1	0	28
065	Chorus Gt.	2	1	28
066	Mid Tone GTR	1	2	28
067	Muted Gt.	1	0	29
068	Funk Pop	1	1	29
069	Funk Gt.2	2	2	29
070	Jazz Man	1	3	29
071	Overdrive Gt	2	0	30
072	Guitar Pinch	2	1	30
073	DistortionGt	2	0	31
074	Feedback Gt.	2	1	31
075	Dist Rtm GTR	2	2	31
076	Gt.Harmonics	1	0	32
077	Gt. Feedback	1	1	32
078	Acoustic Bs.	2	0	33
079	Fingered Bs.	1	0	34
080	Finger Slap	2	1	34
081	Picked Bass	2	0	35
082	Fretless Bs.	2	0	36
083	Slap Bass 1	2	0	37
084	Slap Bass 2	3	0	38
085	Synth Bass 1	2	0	39
086	SynthBass101	1	1	39
087	Acid Bass	1	2	39
088	Clavi Bass	2	3	39
089	Hammer	2	4	39
090	Synth Bass 2	3	0	40
091	Beef FM Bass	2	1	40
092	RubberBass 2	2	2	40
093	Attack Pulse	1	3	40
094	Violin	1	0	41
095	Slow Violin	1	1	41
096	Viola	1	0	42
097	Cello	1	0	43
098	Contrabass	1	0	44
099	Tremolo Str	3	0	45
100	PizzicatoStr	2	0	46
101	Harp	1	0	47
102	Yang Qin	2	1	47
103	Timpani	3	0	48
104	Orche str	2	0	49
105	Orchestra	4	1	49
106	60s Strings	4	2	49
107	Slow Strings	2	0	50
108	Syn.Strings1	3	0	51
109	Syn.Strings3	3	1	51
110	Syn.Strings2	3	0	52
111	Choir Aahs	2	0	53
112	Chorus Aahs	2	1	53
113	Voice Oohs	3	0	54
114	Humming	2	1	54
115	SynVox	3	0	55
116	Analog Voice	1	1	55
117	OrchestraHit	2	0	56
118	Bass Hit	2	1	56
119	6th Hit	2	2	56
120	Euro Hit	2	3	56
121	Trumpet	1	0	57
122	Dark Trumpet	1	1	57
123	Trombone	1	0	58
124	Trombone 2	1	1	58
125	Bright Tb	1	2	58
126	Tuba	1	0	59
127	MutedTrumpet	1	0	60
128	MuteTrumpet2	1	1	60
129	French Horns	2	0	61
130	Fr.Horn 2	1	1	61
131	Brass 1	4	0	62
132	Brass 2	4	1	62
133	Synth Brass1	3	0	63
134	Pro Brass	3	1	63
135	Oct SynBrass	3	2	63
136	Jump Brass	3	3	63
137	Synth Brass2	3	0	64
138	SynBrass sfz	2	1	64
139	Velo Brass 1	2	2	64
140	Soprano Sax	1	0	65
141	Alto Sax	1	0	66
142	Tenor Sax	2	0	67
143	Baritone Sax	2	0	68
144	Oboe	2	0	69
145	English Horn	1	0	70
146	Bassoon	1	0	71
147	Clarinet	1	0	72
148	Piccolo	1	0	73
149	Flute	1	0	74
150	Recorder	1	0	75
151	Pan Flute	1	0	76
152	Bottle Blow	2	0	77
153	Shakuhachi	2	0	78
154	Whistle	1	0	79
155	Ocarina	2	0	80
156	Square Wave	2	0	81
157	MG Square	1	1	81
158	2600 Sine	1	2	81
159	Saw Wave	2	0	82
160	OB2 Saw	1	1	82
161	Doctor Solo	2	2	82
162	Natural Lead	2	3	82
163	SequencedSaw	2	4	82
164	Syn.Calliope	2	0	83
165	Chiffer Lead	2	0	84
166	Charang	2	0	85
167	Wire Lead	2	1	85
168	Solo Vox	2	0	86
169	5th Saw Wave	2	0	87
170	Bass & Lead	2	0	88
171	Delayed Lead	2	1	88
172	Fantasia	2	0	89
173	Warm Pad	1	0	90
174	Sine Pad	2	1	90
175	Polysynth	2	0	91
176	Space Voice	4	0	92
177	Itopia	3	1	92
178	Bowed Glass	3	0	93
179	Metal Pad	3	0	94
180	Halo Pad	3	0	95
181	Sweep Pad	2	0	96
182	Ice Rain	2	0	97
183	Soundtrack	2	0	98
184	Crystal	2	0	99
185	Syn Mallet	1	1	99
186	Atmosphere	2	0	100
187	Brightness	3	0	101
188	Goblin	2	0	102
189	Echo Drops	2	0	103
190	Echo Bell	3	1	103
191	Echo Pan	2	2	103
192	Star Theme	2	0	104
193	Sitar	1	0	105
194	Sitar 2	2	1	105
195	Banjo	1	0	106
196	Shamisen	2	0	107
197	Koto	2	0	108
198	Taisho Koto	2	1	108
199	Kalimba	1	0	109
200	Bagpipe	3	0	110
201	Fiddle	2	0	111
202	Shanai	1	0	112
203	Tinkle Bell	3	0	113
204	Agogo	1	0	114
205	Steel Drums	1	0	115
206	Woodblock	1	0	116
207	Castanets	1	1	116
208	Taiko	3	0	117
209	Concert BD	4	1	117
210	Melo. Tom 1	1	0	118
211	Melo. Tom 2	1	1	118
212	Synth Drum	2	0	119
213	808 Tom	2	1	119
214	Elec Perc	1	1	119
215	Reverse Cym.	1	0	120
216	Gt.FretNoise	1	0	121
217	Gt.Cut Noise	1	1	121
218	String Slap	1	2	121
219	Breath Noise	1	0	122
220	Fl.Key Click	1	1	122
221	Seashore	2	0	123
222	Rain	2	1	123
223	Thunder	1	2	123
224	Wind	2	3	123
225	Stream	2	4	123
226	Bubble	2	5	123
227	Bird	2	0	124
228	Dog	1	1	124
229	Horse-Gallop	1	2	124
230	Bird 2	1	3	124
231	Telephone 1	1	0	125
232	Telephone 2	1	1	125
233	DoorCreaking	1	2	125
234	Door	1	3	125
235	Scratch	2	4	125
236	Wind Chimes	2	5	125
237	Helicopter	2	0	126
238	Car-Engine	1	1	126
239	Car-Stop	1	2	126
240	Car-Pass	1	3	126
241	Car-Crash	2	4	126
242	Siren	1	5	126
243	Train	1	6	126
244	Jetplane	2	7	126
245	Starship	2	8	126
246	Burst Noise	2	9	126
247	Applause	2	0	127
248	Laughing	1	1	127
249	Screaming	1	2	127
250	Punch	1	3	127
251	Heart Beat	1	4	127
252	Footsteps	1	5	127
253	Gun Shot	1	0	128
254	Machine Gun	1	1	128
255	Lasergun	1	2	128
256	Explosion	2	3	128

Rhythm Set List

USER (User Group)

CC#0 = 86, CC#32 = 0

No.	Name
001	StandardKit3
002	Xantom Kit
003	PassionDrums
004	Arpeggiate!?
005	De Facto Kit
006	StandardKit1
007	Rock Kit 1
008	Rock Kit 2
009	Brush Jz Kit
010	Orch Kit
011	909 808 Kit
012	Limiter Kit
013	HipHop Kit 1
014	HipHop Kit 2
015	HipHop&Latin
016	Machine&Hip
017	R&B Kit
018	HiFi R&B Kit
019	Machine Kit1
020	Kit-Euro:POP
021	House Kit
022	Nu Technica
023	Machine Kit2
024	ArtificalKit
025	Noise Kit
026	Kick Menu
027	Snare Menu 1
028	Snare Menu 2
029	HiHat Menu
030	FX/SFX Menu
031	Percussion
032	*PrstSmplKit

PRST (Preset Group)

CC#0 = 86, CC#32 = 64

No.	Name
001	StandardKit1
002	StandardKit2
003	StandardKit3
004	Rock Kit 1
005	Rock Kit 2
006	Brush Jz Kit
007	Orch Kit
008	909 808 Kit
009	Limiter Kit
010	HipHop Kit 1
011	HipHop Kit 2
012	HipHop&Latin
013	Machine&Hip
014	R&B Kit
015	HiFi R&B Kit
016	Machine Kit1
017	4 Kit MIX
018	Kit-Euro:POP
019	House Kit
020	Nu Technica
021	Machine Kit2
022	ArtificalKit
023	Noise Kit
024	Kick Menu
025	Snare Menu 1
026	Snare Menu 2
027	HiHat Menu
028	Rim&Tom Menu
029	Clp&Cym&Hit
030	FX/SFX Menu
031	Percussion
032	Scrh&Voi&Wld
033	Xantom Kit
034	PassionDrums
035	Arpeggiate!?
036	De Facto Kit

GM2 (GM2 Group)

CC#0 = 120, CC#32 = 0

No.	Name
001	GM2 STANDARD
002	GM2 ROOM
003	GM2 POWER
004	GM2 ELECTRIC
005	GM2 ANALOG
006	GM2 JAZZ
007	GM2 BRUSH
008	GM2 ORCHESTRA
009	GM2 SFX

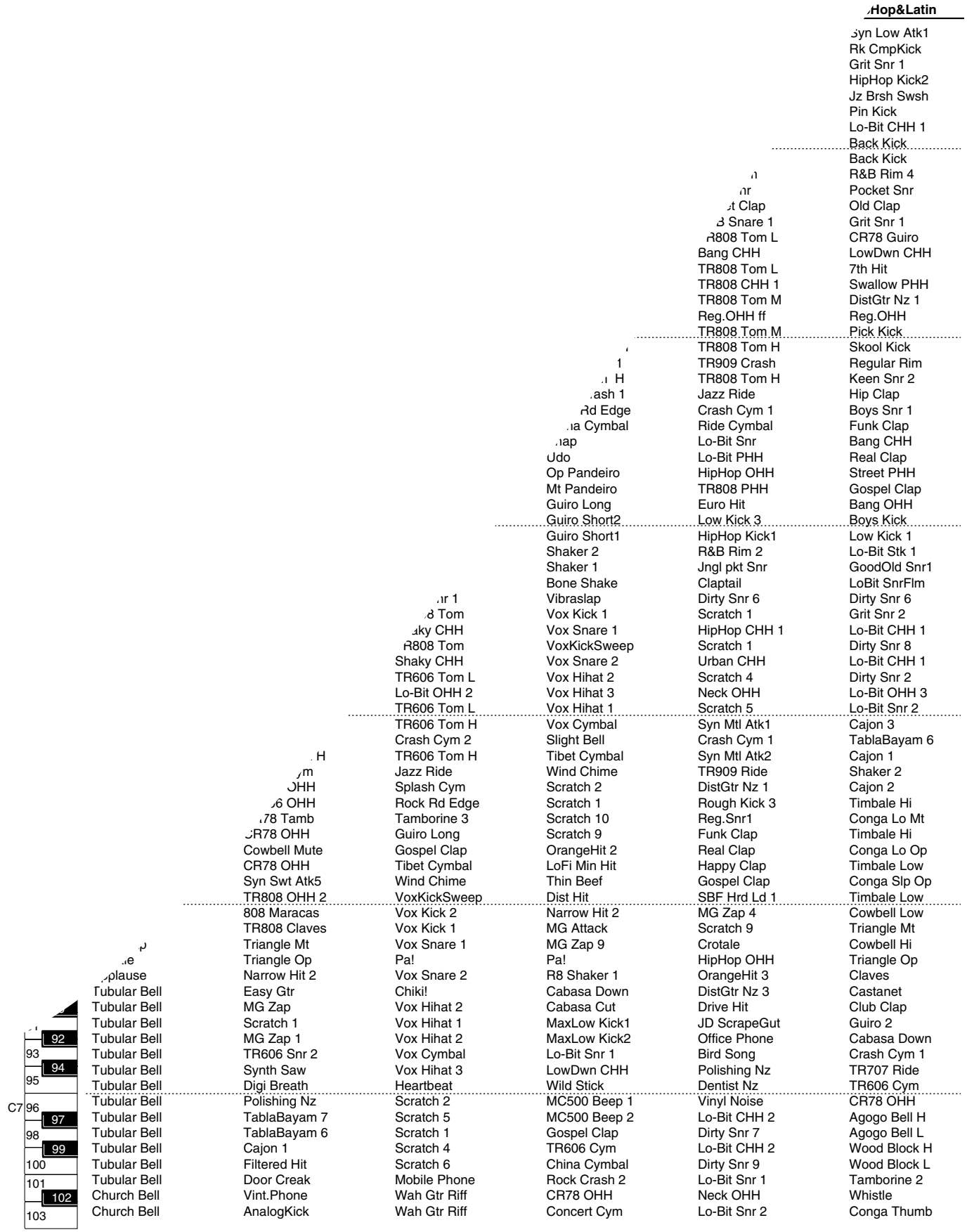
CARD (Card Group)

CC#0 = 86, CC#32 = 32

* *The Rhythm Set with * mark to the head of its name uses the Preset Samples.*
Therefore, in order to play this Rhythm Set, the Preset Samples need to be loaded to Fantom-Xa.

PRST (Preset Group)

Note No.	001 StandardKit1	002 StandardKit2	003 StandardKit3	004 Rock Kit 1	005 Rock Kit 2	006 Brush Jz Kit
28	MaxLow Kick3	Dance Kick	HipHop Kick2	R&B Kick	MaxLow Kick2	TR909 Kick 1
29	Rk CmpKick	Dry Kick 1	Frenzy Kick	Rk CmpKick	MaxLow Kick1	TR909 Kick
30	Gospel Clap	Snr Roll	Low Down Snr	Snr Roll	Pop Snr Rim	Jz Brsh Slap
31	Boys Kick	Power Kick	TR707 Kick	Bright Kick	Power Kick	Old Kick
32	Snr Roll	Amb.Snr 2	Frenzy Snr 1	Snr Roll Lp	Med Snare	Soft Jz Roll
33	HipHop Kick2	Power Kick	TR606DstKick	SH32 Kick	Bright Kick	R&B Kick
34	Reg.PHH mf	Reg.PHH	Reg.PHH	Reg.PHH	Rock CHH 2	Reg.PHH
35	Reg.Kick	Reg.Kick	Low Kick 1	Reg.Kick	Rock Kick	Jazz Kick
C2 36	Reg.Kick	Reg.Kick	Old Kick	Reg.Kick	Rk CmpKick	Jazz Kick
37	Reg.Stick	Wild Stick	Lo-Bit Stk 4	Reg.Stick	Rock Stick	Reg.Stick
38	Reg.Snr 2	Amb.Snr 1	Reg.Snr 1	Reg.Snr 2	Maple Snr	Jazz Rim
39	Reg.SnrGst	Reg.SnrGst	Amb Clap	Reg.SnrGst	Sft Snr Gst	Jz Brsh Swsh
40	Reg.Snr 1	Amb.Snr 2	Med Snare	Reg.Snr 1	Rock Snr	Jazz Snr
41	Reg.F.Tom	Reg.F.Tom	Jazz Lo Tom	Reg.F.Tom	Sharp L.Tom6	Reg.F.Tom
42	Reg.CHH 1	Reg.CHH 1	Reg.CHH 1	Reg.CHH 1	Rock CHH 1	Reg.CHH 1
43	Reg.L.Tom	Reg.L.Tom	Jazz Lo Tom	Reg.L.Tom	Sharp L.Tom5	Reg.L.Tom
44	Reg.CHH 2	Reg.CHH 2	Reg.CHH 2	Reg.CHH 2	Rock PHH	Reg.CHH 2
45	Reg.M.Tom	Reg.M.Tom	Jazz Mid Tom	Reg.M.Tom	Sharp L.Tom4	Reg.M.Tom
46	Reg.OHH	Reg.OHH	Reg.OHH	Reg.OHH	Rock OHH	Reg.OHH
47	Reg.M.Tom	Reg.M.TomFlm	Jazz Mid Tom	Reg.M.TomFlm	Sharp H.Tom3	Reg.M.Tom
C3 48	Reg.H.Tom	Reg.H.Tom	Jazz Hi Tom	Reg.H.Tom	Sharp H.Tom2	Reg.H.Tom
49	Crash Cym 1	Crash Cym 1	Crash Cym1	Crash Cym 1	Crash Cym 1	Jazz Crash
50	Reg.H.Tom	Reg.H.TomFlm	Jazz Hi Tom	Reg.H.TomFlm	Sharp H.Tom1	Reg.H.Tom
51	Rock Ride	Rock Ride	Rock Rd Edge	Rock Ride	Ride Cymbal	Jazz Ride
52	China Cymbal	China Cymbal	China Cymbal	China Cymbal	China Cymbal	China Cymbal
53	Ride Edge	Splash Cym	Rock Rd Cup	Splash Cym	Ride Bell	Ride Edge
54	Tamborine	Tamborine	Tamborine	Tamborine	Tamborine 3	Tamborine
55	Crash Cym	Rock Crash 1	Splash Cym	Rock Crash 1	Rock Crash 2	Crash Cym
56	Cowbell Low	Cowbell Hi	Cowbell	Cowbell Hi	Cowbell Mute	Cowbell Low
57	Crash Cym 2	Crash Cym 1	Rock Crash 2	Crash Cym 1	Splash Cym	Crash Cym
58	Cowbell Hi	Cowbell Low	CR78 Guiro	Cowbell Low	Cowbell	Cowbell Hi
59	Ride Bell	Rock Ride	Jazz Ride	Rock Ride	Rock Rd Cup	Ride Bell
C4 60	Conga Hi Mt	Conga Hi Mt	Bongo Hi	Conga Hi Mt	Conga Hi Mt	Conga Hi Mt
61	Conga Lo Mt	Conga Lo Mt	Bongo Lo	Conga Lo Mt	Conga Lo Mt	Conga Lo Mt
62	Conga Lo	Conga Hi Slp	Conga Hi Mt	Conga Hi Slp	Conga Slp Op	Conga Lo Slp
63	Conga Hi Op	Conga Hi Op	Conga Hi	Conga Hi Op	Conga Hi Op	Conga Hi Op
64	Conga Lo Op	Conga Lo Op	Conga Lo	Conga Lo Op	Conga Lo Op	Conga Lo Op
65	Timbale Hi	Timbale Hi	Timbale Hi	Timbale Hi	Timbale Hi	Timbale Hi
66	Timbale Low	Timbale Low	Timbale Low	Timbale Low	Timbale Low	Timbale Low
67	Agogo Bell H	Mild Agogo H	Cowbell Hi	Agogo Bell H	Agogo Bell H	Agogo Bell H
68	Agogo Bell L	Mild Agogo L	Cowbell Low	Agogo Bell L	Agogo Bell L	Agogo Bell L
69	Cabasa Up	Cabasa Up	Cabasa	Cabasa Up	Cabasa Up	Cabasa Up
70	Maracas	Maracas	Shaker	Maracas	Maracas	Maracas
71	Whistle Shrt	Whistle Shrt	Urban CHH	Whistle Shrt	Whistle Shrt	Jazz Kick
C5 72	Whistle Long	Whistle Long	Scratch 5	Whistle Long	Whistle Long	Jazz Kick
73	Guiro Short	Guiro Short	Syn Low Atk2	Guiro Short	Guiro Short	Reg.Stick
74	Guiro Long	Guiro Long	MG Zap 3	Guiro Long	Guiro Long	Jazz Rim
75	Claves	Claves	Syn Swt Atk1	Claves	Claves	Sft Snr Gst
76	Wood Block H	Wood Block H	Syn Swt Atk4	Wood Block H	Wood Block H	Jazz Snr
77	Wood Block L	Wood Block L	Bongo Hi Slp	Wood Block L	Wood Block L	Reg.F.Tom
78	Cuica Mute	Cuica Mute	Vox Hihat 2	Cuica Mute	Cuica Mute	Reg.CHH 1
79	Cuica Open	Cuica Open	Vox Hihat 3	Cuica Open	Cuica Open	Reg.L.Tom
80	Triangle Mt	Triangle Mt	Triangle 1	Triangle Mt	Triangle Mt	Reg.CHH 2
81	Triangle Op	Triangle Op	Triangle 2	Triangle Op	Triangle Op	Reg.M.Tom
82	Cabasa Cut	Cabasa Cut	Cajon	Cabasa Cut	Cabasa Cut	Reg.OHH
83	Castanet	DigiSpectrum	Cajon 3	DigiSpectrum	Wind Chime	Reg.M.TomFlm
C6 84	Bongo Hi Mt	Wind Chime	Wind Chime	Wind Chime	Dst Gtr Riff	Reg.H.Tom p
85	Bongo Hi Slp	Wood Block	SprgDrm Hit	Gtr Cut 1	Gtr Trill	Jazz Cymbal
86	Bongo Lo Slp	Cajon 2	Crotale	Gtr Cut 2	Gtr Cut 1	Reg.H.TomFlm
87	Bongo Hi Op	ConcertBD	R8 Click	Gtr Cut 3	Gtr Cut 2	Jazz Ride
88	Bongo Lo Op	R&B Kick	Metro Bell	Gtr Cut 4	Gtr Cut 3	China Cymbal
89	Cajon 1	Dry Kick 2	DR202 Beep	Rock PHH	Gtr Cut 4	Cajon 1
90	Cajon 2	Old Kick	Reverse Cym	Rock CHH 2	Dist Mute	Cajon 2
91	Cajon 3	Jazz Doos	Xylo Seq.	TablaBayam 1	Dist Chord	Cajon 3
92	Udo	Agogo Noise	Vinyl Noise	Rock CHH 1	DistGtr Nz 1	Udo
93	Udu Pot Hi	Rock OHH	Mobile Phone	TablaBayam 2	DistGtr Nz 2	Udu Pot Hi
94	Udu Pot Slp	JD Anklungs	Group Snap	Rock OHH	DistGtr Nz 3	Udu Pot Slp
95	TablaBayam 1	Rock OHH	Laser	TablaBayam 5	JD Switch	TablaBayam 1
C7 96	TablaBayam 2	Udo	Siren	Cajon 3	Cajon 3	TablaBayam 2
97	TablaBayam 3	Cajon 1	AnalogKick 3	Cajon 2	Cajon 2	TablaBayam 3
98	TablaBayam 4	Udu Pot Hi	TR909 Kick 1	Cajon 1	Cajon 1	TablaBayam 4
99	TablaBayam 5	Gospel Clap	Reg.Kick	Gospel Clap	Real Clap	TablaBayam 5
100	TablaBayam 6	Bright Clap	TR909 Snr 4	Rock Crash 2	Gospel Clap	TablaBayam 6
101	Wind Chime	Rock Rd Cup	TR808 Snr 2	Rock Rd Cup	Tibet Cymbal	Wind Chime
102	Tibet Cymbal	Cowbell	Artful Snr	Club FinSnap	Tamborine 1	Tibet Cymbal
103	Slight Bell	Crash Cym 2	Cross Snr	TR909 Snr 6	Tamborine 2	Slight Bell


HipHop&Latin
Syn Low Atk1
Rk CmpKick
Grit Snr 1
HipHop Kick2
Jz Brsh Swsh
Pin Kick
Lo-Bit CHH 1
Back Kick
Back Kick
R&B Rim 4
Pocket Snr
Old Clap
Grit Snr 1
CR78 Guiro
LowDwn CHH
7th Hit
Swallow PHH
DistGtr Nz 1
Reg.OHH
Pick Kick
Skool Kick
Regular Rim
Keen Snr 2
Hip Clap
Boys Snr 1
Funk Clap
Bang CHH
Real Clap
Street PHH
Gospel Clap
Bang OHH
Boys Kick
Low Kick 1
Lo-Bit Stk 1
GoodOld Snr1
LoBit SnrFlm
Dirty Snr 6
Grit Snr 2
Lo-Bit CHH 1
Dirty Snr 8
Lo-Bit CHH 1
Dirty Snr 2
Lo-Bit OHH 3
Lo-Bit Snr 2
Cajon 3
TablaBayam 6
Cajon 1
Shaker 2
Cajon 2
Timbale Hi
Conga Lo Mt
Timbale Hi
Conga Lo Op
Timbale Low
Conga Slp Op
Timbale Low
Cowbell Low
Triangle Mt
Cowbell Hi
Triangle Op
Claves
Castanet
Club Clap
Guiro 2
Cabasa Down
Crash Cym 1
TR707 Ride
TR606 Cym
CR78 OHH
Agogo Bell H
Agogo Bell L
Wood Block H
Wood Block L
Tamborine 2
Whistle
Conga Thumb
Vinyl Noise
Lo-Bit CHH 2
Dirty Snr 7
Lo-Bit CHH 2
Dirty Snr 9
Lo-Bit Snr 1
Neck OHH
Lo-Bit Snr 2
Syn Mtl Atk1
Crash Cym 1
Syn Mtl Atk2
TR909 Ride
DistGtr Nz 1
Rough Kick 3
Reg.Snr1
Funk Clap
Real Clap
Happy Clap
Gospel Clap
SBF Hrd Ld 1
MG Zap 4
Scratch 9
Crotale
HipHop OHH
OrangeHit 3
DistGtr Nz 3
Drive Hit
JD ScrapeGut
Office Phone
Bird Song
Polishing Nz
Dentist Nz
MC500 Beep 1
MC500 Beep 2
Gospel Clap
TR606 Cym
China Cymbal
Rock Crash 2
CR78 OHH
Concert Cym
Lo-Bit Snr
Lo-Bit PHH
HipHop OHH
TR808 PHH
Euro Hit
Low Kick 3
HipHop Kick1
R&B Rim 2
Jngl pkt Snr
Claptail
Dirty Snr 6
Scratch 1
HipHop CHH 1
Scratch 1
Urban CHH
Scratch 4
Neck OHH
Scratch 5
Vibraslap
Vox Kick 1
Vox Snare 1
VoxKickSweep
Vox Snare 2
Vox Hihat 2
Vox Hihat 3
Vox Hihat 1
Vox Cymbal
Slight Bell
Tibet Cymbal
Wind Chime
Scratch 2
Scratch 1
Scratch 10
Scratch 9
OrangeHit 2
LoFi Min Hit
Thin Beef
Dist Hit
Narrow Hit 2
MG Attack
MG Zap 9
Pa!
R8 Shaker 1
Cabasa Down
Cabasa Cut
MaxLow Kick1
MaxLow Kick2
Lo-Bit Snr 1
LowDwn CHH
Wild Stick
MC500 Beep 1
MC500 Beep 2
Gospel Clap
TR606 Cym
China Cymbal
Rock Crash 2
CR78 OHH
Concert Cym
Bone Shake
Shaker 1
Shaker 2
Guiro Short1
Guiro Short2
Guiro Long
Mt Pandeiro
Op Pandeiro
Udo
Lo-Bit Snr
Ride Cymbal
Crash Cym 1
Jazz Ride
TR808 Tom H
TR909 Crash
TR808 Tom H
TR808 Tom M
TR808 CHH 1
TR808 Tom L
Bang CHH
R808 Tom L
Grit Snr 1
Old Clap
Pocket Snr
R&B Rim 4
Pick Kick
Regular Rim
Keen Snr 2
Hip Clap
Boys Snr 1
Funk Clap
Bang CHH
Real Clap
Street PHH
Gospel Clap
Bang OHH
Boys Kick
Low Kick 1
Lo-Bit Stk 1
GoodOld Snr1
LoBit SnrFlm
Dirty Snr 6
Grit Snr 2
Lo-Bit CHH 1
Dirty Snr 8
Lo-Bit CHH 1
Dirty Snr 2
Lo-Bit OHH 3
Lo-Bit Snr 2
Cajon 3
TablaBayam 6
Cajon 1
Shaker 2
Cajon 2
Timbale Hi
Conga Lo Mt
Timbale Hi
Conga Lo Op
Timbale Low
Conga Slp Op
Timbale Low
Cowbell Low
Triangle Mt
Cowbell Hi
Triangle Op
Claves
Castanet
Club Clap
Guiro 2
Cabasa Down
Crash Cym 1
TR707 Ride
TR606 Cym
CR78 OHH
Agogo Bell H
Agogo Bell L
Wood Block H
Wood Block L
Tamborine 2
Whistle
Conga Thumb
TR606 Tom L
Lo-Bit OHH 2
Shaky CHH
TR606 Tom
Vox Kick 1
Vox Snare 1
VoxKickSweep
Vox Snare 2
Vox Hihat 2
Vox Hihat 3
Vox Hihat 1
Vox Cymbal
Slight Bell
Tibet Cymbal
Wind Chime
Scratch 2
Scratch 1
Scratch 10
Scratch 9
OrangeHit 2
LoFi Min Hit
Thin Beef
Dist Hit
Narrow Hit 2
MG Attack
MG Zap 9
Pa!
R8 Shaker 1
Cabasa Down
Cabasa Cut
MaxLow Kick1
MaxLow Kick2
Lo-Bit Snr 1
LowDwn CHH
Wild Stick
MC500 Beep 1
MC500 Beep 2
Gospel Clap
TR606 Cym
China Cymbal
Rock Crash 2
CR78 OHH
Concert Cym
TR606 Tom L
Lo-Bit OHH 2
Shaky CHH
TR606 Tom
Vox Kick 1
Vox Snare 1
VoxKickSweep
Vox Snare 2
Vox Hihat 2
Vox Hihat 3
Vox Hihat 1
Vox Cymbal
Slight Bell
Tibet Cymbal
Wind Chime
Scratch 2
Scratch 1
Scratch 10
Scratch 9
OrangeHit 2
LoFi Min Hit
Thin Beef
Dist Hit
Narrow Hit 2
MG Attack
MG Zap 9
Pa!
R8 Shaker 1
Cabasa Down
Cabasa Cut
MaxLow Kick1
MaxLow Kick2
Lo-Bit Snr 1
LowDwn CHH
Wild Stick
MC500 Beep 1
MC500 Beep 2
Gospel Clap
TR606 Cym
China Cymbal
Rock Crash 2
CR78 OHH
Concert Cym
TR606 Tom H
Crash Cym 2
TR606 Tom H
Jazz Ride
Splash Cym
Rock Rd Edge
Tamborine 3
Guiro Long
Gospel Clap
Tibet Cymbal
Wind Chime
VoxKickSweep
Vox Kick 2
Vox Kick 1
Vox Snare 1
Pa!
Vox Snare 2
Chiki!
Vox Hihat 2
Vox Hihat 1
Vox Hihat 2
Vox Cymbal
Vox Hihat 3
Heartbeat
Scratch 2
Scratch 5
Scratch 1
Scratch 4
Scratch 6
Mobile Phone
Wah Gtr Riff
Wah Gtr Riff
TR808 OHH 2
808 Maracas
TR808 Claves
Triangle Mt
Triangle Op
Narrow Hit 2
Easy Gtr
MG Zap
Scratch 1
MG Zap 1
TR606 Snr 2
Synth Saw
Digi Breath
Polishing Nz
TablaBayam 7
TablaBayam 6
Cajon 1
Filtered Hit
Door Creak
Vint.Phone
AnalogKick
Cowbell Mute
CR78 OHH
Syn Swt Atk5
Tubular Bell
Tubular Bell
Tubular Bell
Tubular Bell
Tubular Bell
Tubular Bell
Tubular Bell
Tubular Bell
Tubular Bell
Tubular Bell
Tubular Bell
Tubular Bell
Tubular Bell
Church Bell
Church Bell
C7
92
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103

PRST (Preset Group)

Note No.	013 Machine&Hip	014 R&B Kit	015 HiFi R&B Kit	016 Machine Kit1	017 4 Kit MIX	018 Kit-Euro:POP
28	TR909 Kick 2	70's Kick	MaxLow Kick2	TR909 Kick 2	FB Kick	TR707 Kick
29	TR909 Kick 4	Skool Kick	FB Kick	TR909 Kick 4	Pick Kick	AnalogKick 1
30	Chemical Snr	Urbn Sn Roll	Rough Kick1	Light Snr	Tiny Snare	Dirty Snr 6
31	AnalogKick 6	HipHop Kick2	MaxLow Kick1	Back Kick	TR606DstKick	FB Kick
32	TR808 Snr 1	Slap Snr 2	Rough Kick3	DR660 Snr	TR808 Snr 7	Artful Snr
33	70's Kick	Old Kick	Rk CmpKick	Pick Kick	Hippie Kick	PlasticKick2
34	TR808 PHH	HipHop CHH 2	Swallow Kick	TR808 PHH	TR606 PHH 2	Shaky CHH
35	SH32 Kick	Filtered Hit	Low Kick 1	AnalogKick 6	SH32 Kick	Swallow Kick
C2 36	Low Kick 2	Vinyl Kick	Boys Kick	Pick Kick	TR707 Kick	TR909 Kick 6
37	TR808 Rim	Dry Stick 4	Hard Stick	TR808 Rim	R&B Rim 4	R&B Rim 4
38	Lite Snare	Dirty Snr 3	GoodOld Snr3	Jngl pkt Snr	Dirty Snr 6	TR909 Snr 3
39	Short Clap	Frenzy Snr 1	GoodOld Snr4	Funk Clap	TR808 Clap 2	TR909 Clap 1
40	CR78 Snare	Boys Snr 2	GoodOld Snr2	Jngl pkt Snr	Keen Snr 1	TR909 Snr 4
41	CR78 Tamb	VoxKickSwepL	Lo-Bit Snr 1	MG Attack	TablaBayam 7	Sharp L.Tom2
42	Lite CHH	Club CHH 1	Shaky CHH	TR808 CHH 1	Lo-Bit CHH 3	TR909 CHH 1
43	CR78 Tamb	Reg.F.Tom	Slap Snr 3	MG Attack	TablaBayam 7	Sharp L.Tom1
44	Lite OHH	Neck CHH	Club CHH 2	TR808 PHH	TR606 PHH 1	Urban CHH
45	CR78 Beat	VoxKickSwepM	Keen Snr 1	MG Blip	TR909 DstTom	Sharp M.Tom
46	Lite OHH	Lo-Bit OHH 2	Reg.OHH	TR808 OHH 1	TR606 OHH	TR909 OHH 2
47	CR78 Beat	Reg.M.Tom	Keen Snr 1	MG Blip	Skool Kick	Sharp M.Tom
C3 48	CR78 Guiro	VoxKickSwepH	BmbCmp Snr	Beam HiQ	Low Kick 1	Sharp H.Tom
49	TR606 Cym	Rock Crash 1	TR606 Cym	TR606 Cym	R&B Rim 4	TR909 Crash
50	CR78 Guiro	Reg.H.Tom	GoodOld Snr6	Beam HiQ	TR909 Snr 3	Sharp H.Tom
51	Lo-Bit OHH 1	Splash Cym	TR606 Cym	Lo-Bit OHH 1	R8 Clap	TR909 Ride
52	TR606 Cym	Rock Rd Edge	White Noise	TR606 Cym	Boys Snr 1	China Cymbal
53	Lo-Bit OHH 1	Concert Cym	SBF Cym Lp	Lo-Bit OHH 1	Bongo Hi Mt	TR707 Ride
54	CR78 Tamb	Cheap Clap	CR78 Tamb	CR78 Tamb	Reg.OHH	Tamborine 3
55	TR606 Cym	Snap	SBF Bell Lp	TR606 Cym	Bongo Hi Mt	Crash Cym 1
56	JD Sm Metal	Low Down Snr	JD Sm Metal	JD Sm Metal	TR606 PHH 1	Cowbell
57	Lo-Bit OHH 1	Wood Block	TR606 Cym	Lo-Bit OHH 1	Bongo Lo Op	Rock Crash 2
58	Syn Swt Atk3	Shaku Noise	Syn Swt Atk3	Syn Swt Atk3	Reg.OHH ff	Vibraslap
59	Low Kick 3	Syn Hrd Atk1	TR909 Kick 4	AnalogKick 6	TR909 Kick 3	TR606 Cym
C4 60	Low Kick 2	Digi Loop 2	TR909 Kick 4	Back Kick	Click Kick	Bongo Lo
61	R&B Rim 2	Maracas	TR808 Rim	R8 Comp Rim	Swag Rim	Bongo Hi
62	Keen Snr 2	Cabasa Up	TR808 Snr 2	Pocket Snr	Cross Snr	Conga Hi Mt
63	TR808 Clap 2	Cabasa Down	TR808 Clap 2	TR909 Clap 2	Snap	Conga Hi
64	Back Snr	Cabasa Cut	TR808 Snr 4	Boys Snr 3	R&B Snare 1	Conga Lo
65	TR606 Tom L	Tamborine 1	TR808 Tom 4	TR606 Tom L	Vox Snare 1	Conga Efx
66	HipHop CHH 2	Tamborine 2	TR808 CHH 1	Neck CHH	Reg.CHH 2	Vox Hihat 2
67	TR606 Tom L	Tamborine 1	TR808 Tom 3	TR606 Tom	Vox Snare 2	Vox Hihat 3
68	TR808 PHH	Triangle Mt	TR808 CHH 2	Lo-Bit CHH 1	Hip PHH	CR78 Beat
69	TR606 Tom M	Triangle Op	TR808 Tom 2	TR606 Tom L	Triangle 1	Cabasa Cut
70	TR808 OHH 2	Xylo Seq.	TR808 OHH 1	Reg.OHH	Reg.OHH	Shaker 1
71	TR606 Tom M	7th Hit	TR808 Tom 1	TR606 Tom M	AnalogKick 5	Street PHH
C5 72	TR606 Tom H	Mild Hit	Scratch 3	TR606 Tom H	TR808 Kick	Scratch 7
73	Lo-Bit OHH 3	Vinyl Noise	Scratch 4	TR909 Crash	Scratch 5	Syn Low Atk2
74	TR606 Tom H	Cajon 1	Scratch 5	TR606 Tom H	Grit Snr 3	MG Zap 7
75	Lo-Bit OHH 1	Cajon 2	Scratch 6	Lite OHH	Happy Clap	Syn Swt Atk1
76	TR909 Crash	Cajon 3	Short Clap	TR909 Crash	Grit Snr 3	Syn Swt Atk4
77	Lite OHH	Conga Hi Mt	Hand Clap	Lite OHH	Snap	Conga Thumb
78	CR78 Tamb	Conga Lo Mt	R8 Clap	CR78 Tamb	CR78 CHH	Triangle 1
79	TR909 Crash	Conga Hi Slp	Cabasa Cut	TR909 Crash	Snap	Triangle 2
80	JD Sm Metal	Conga Lo Slp	R8 Shaker 2	JD Sm Metal	CR78 OHH	Drive Hit
81	Lite OHH	Conga Hi Op	Tamborine 2	Lite OHH	TablaBayam 3	Tao Hit
82	Syn Swt Atk1	Conga Lo Op	Shaker 1	Syn Swt Atk1	CR78 OHH	Filtered Hit
83	TR808 OHH 2	Conga Slp Op	Bone Shake	TR808 OHH 2	TablaBayam 3	Euro Hit
C6 84	808 Maracas	Conga Efx	Tibet Cymbal	808 Maracas	Udu Pot Hi	Wind Chime
85	TR808 Claves	Conga Thumb	Crotale	TR808 Claves	TR606 Cym	Timpani Roll
86	Triangle Mt	Vox Cymbal	Slight Bell	Triangle Mt	Udu Pot Hi	Crotale
87	Triangle Op	Chiki!	Wind Chime	Triangle Op	Lo-Bit OHH 1	R8 Click
88	OrangeHit 1	Castanet	Triangle 1	Narrow Hit 2	Crash Cym 1	Metro Bell
89	Punch	CR78 Beat	Mild CanWave	OrangeHit 1	TR707 Ride	MC500 Beep 1
90	MG Zap 1	CR78 OHH	JDStrikePole	MG Zap 4	Maracas	MC500 Beep 2
91	Scratch 1	CR78 CHH	JD Plunk	Scratch 1	TR707 Ride	Atmosphere
92	MG Zap 1	Lite OHH	Syn Swt Atk2	MG Zap 1	Scratch 6	Polishing Nz
93	TR606 Snr 2	CR78 Tamb	GtrStroke Nz	TR606 Snr 2	TR606 Cym	Car Slip
94	Synth Saw	JD Vox Noise	River	Synth Saw	SBF Nz Lp	Group Snap
95	Digi Breath	CR78 Guiro	Bubble	Digi Breath	SBF Cym Lp	Laser
C7 96	Polishing Nz	Metro Click	Train Pass	Polishing Nz	Agogo Noise	ConcertBD Lp
97	Vibraslap	Metro Bell	Dentist Nz	TablaBayam 7	TablaBayam 7	AnalogKick 3
98	Door Creak	Wind Chime	Org Leakage	TablaBayam 6	TablaBayam 6	Old Kick
99	Filtered Hit	Slight Bell	Agogo Noise	Cajon 1	Cajon 1	Reg.Kick
100	TR909 Ride	Crash Cym 1	SBF Vox Lp	Filtered Hit	Filtered Hit	TR909 Snr 4
101	EP Release	TR909 Crash	SynVox Noise	Door Creak	Laugh	TR808 Snr 2
102	Syn Low Atk1	CR78 OHH	R8 Click	Vint.Phone	JD Triangle	Artful Snr
103	AnalogKick 6	Lite OHH	Syn Swt Atk1	AnalogKick 6	AnalogKick 6	Cross Snr

Rhythm Set List

PRST (Preset Group)

Note No.	019 House Kit	020 Nu Technica	021 Machine Kit2	022 ArtificalKit	023 Noise Kit	024 Kick Menu
28	TR909 Kick 3	SH32 Kick	AnalogKick 5	TR909 Kick 2	TR909 Kick 2	-----
29	SH32 Kick	JD EML 5th	AnalogKick 6	AnalogKick 2	TR909 Kick 4	-----
30	Urbn Sn Roll	AnalogKick 6	Analog Snr 1	TR808 Snr 5	Urbn Sn Roll	-----
31	TR909 Kick 2	Low Kick 2	AnalogKick 1	TR909 Kick 3	TR909 Kick 5	-----
32	TR909 Snr 6	PlasticKick3	TR808 Snr 4	Boys Snr 3	SBF Nz Lp	-----
33	TR909 Kick 5	Low Kick 1	FB Kick	FB Kick	TR909 Kick 1	-----
34	TR909 PHH 2	TR707 Kick	TR808 PHH	TR606 Cym	Syn Swt Atk7	-----
35	TR909 Kick 4	PlasticKick3	AnalogKick 6	AnalogKick 3	SBF Vox Kick	Reg.Kick p
C2 36	TR909 Kick 4	SH32 Kick	AnalogKick 6	TVF Trigger	SBF Vox Kick	Reg.Kick f
37	TR909 Rim	TR909 Snr 5	Swag Rim	TR909 Rim	Laser	Reg.Kick ff
38	TR909 Snr 4	TR909 Snr 2	TR909 Snr 1	TR909 Snr 1	SBF Nz Lp	Reg.Kick
39	TR909 Clap 2	Flange Snr	TR707 Clap	Claptail	Train Pass	Rock Kick p
40	TR909 Snr 5	Disc Clap	Frenzy Snr 1	TR909 Snr 3	SBF Nz Lp	Rock Kick mf
41	TR909 Tom L	Dance CHH	Deep Tom L	TR909 Tom L2	Syn Swt AtkL	Rock Kick
42	TR909 CHH 2	TR606 DstCHH	TR606 CHH 1	TR909 CHH 1	Syn Swt Atk7	Jazz Kick p
43	TR909 Tom L	TR909 PHH 2	Deep Tom L	TR909 Tom L1	Syn Swt AtkL	Jazz Kick mf
44	TR909 PHH 2	TR606 PHH 2	TR606 PHH 1	TR909 PHH 1	Syn Mtl Atk2	Jazz Kick f
45	TR909 Tom M	TR909 OHH 1	Deep Tom M	TR909 Tom M2	Syn Swt AtkM	Jazz Kick
46	TR909 OHH 2	Lite OHH	TR909 OHH 2	TR909 OHH 2	SBF Nz Lp	Dry Kick 1
47	TR909 Tom M	Rock Rd Cup	Deep Tom M	TR909 Tom M1	Syn Swt AtkM	Tight Kick 1
C3 48	TR909 Tom H	Syn Hrd Atk4	Deep Tom H	TR909 Tom H2	Syn Swt AtkH	Tight Kick 2
49	TR909 Crash	MG Zap 7	Lite OHH	TR909 Crash	Digi Loop 1	Old Kick
50	TR909 Tom H	MG Zap 9	Deep Tom H	TR909 Tom H1	Syn Swt AtkH	Jz Dry Kick
51	TR909 Ride	MG Zap 8	TR808 OHH 1	TR909 Ride	Calc.Saw	Bright Kick
52	TR909 Crash	MG Zap 10	TR606 Cym	White Noise	Crotale	Dry Kick 2
53	TR909 Ride	HipHop CHH 2	TR909 Ride	CR78 Beat	Laser	Dry Kick 3
54	CR78 Tamb	Syn Swt Atk3	CR78 Tamb	Tamborine 3	MG Zap 11	Power Kick
55	MG Zap 4	Street PHH	TR606 Cym	Atmosphere	Laser	R&B Kick
56	JD Sm Metal	Syn Swt Atk6	JD Sm Metal	Cowbell Mute	MG Zap 4	Rk CmpKick
57	MG Zap 5	HipHop OHH	TR909 Ride	Digi Loop 2	Digi Loop 1	MaxLow Kick1
58	Syn Swt Atk3	TR909 OHH 2	Syn Swt Atk3	Cowbell	MG Zap 6	MaxLow Kick2
59	AnalogKick 2	TR909 R.Crsh	AnalogKick 1	Reverse Cym	Syn Low AtkL	MaxLow Kick3
C4 60	TR909 Kick 2	TR909 Crash	AnalogKick 4	AnalogKick 5	Syn Low AtkH	Dist Kick
61	TR909 Rim	Rock Crash 1	Urbn Sn Roll	Metal Vox W1	MG Attack	FB Kick
62	TR909 Snr 1	MG Zap 2	Analog Snr 2	Metal Vox W2	Syn Hrd Atk4	Rough Kick1
63	TR909 Clap 1	MG Zap 9	Dist Clap	Metal Vox W3	Train Pass	Rough Kick2
64	TR909 Snr 2	Smear Hit 2	Analog Snr 3	White Noise1	Syn Mtl Atk1	Rough Kick3
65	TR909 D.TomL	Low Square	R8 Shaker 1	White Noise2	Syn Swt AtkL	Click Kick
66	TR909 CHH 1	JD Wood Crak	TR909 CHH 2	TR606 Cym	Syn Swt Atk7	Pick Kick
67	TR909 D.TomL	Piano Atk Nz	R8 Shaker 1	MG Blip	Syn Swt AtkL	Back Kick
68	TR808 CHH 2	JD Wood Crak	TR909 PHH 2	MG Blip Rev.	Syn Mtl Atk2	Vinyl Kick
69	TR909 D.TomM	DR202 Beep	SBF Bell Lp1	Polishing Nz	Syn Swt AtkM	Low Kick 1
70	TR909 OHH 1	JD Wood Crak	TR909 OHH 2	Ice Crash	SBF Nz Lp	Boys Kick
71	TR909 D.TomM	Saw Sync B	SBF Bell Lp2	Metal Vox L2	Syn Swt AtkM	Hippie Kick
C5 72	TR909 D.TomH	DR202 Beep	SBF Bell Lp3	Thin Beef	Syn Swt AtkH	Frenzy Kick
73	TR909 Crash	OrangeHit 1	TR909 Crash	7th Hit	Digi Loop 1	PlasticKick1
74	TR909 D.TomH	E.Gtr Harm	SBF Bell Lp4	Alpha Rave	Syn Swt AtkH	Swallow Kick
75	TR909 Ride	Filtered Hit	TR909 Ride	DistTB Sqr	Calc.Saw	Neck Kick
76	TR909 Crash	Euro Hit	TR909 Crash	Finger Snap	Crotale	70's Kick
77	TR909 Ride	Jazz Tom L	TR909 Ride	Conga Slp Op	Laser	Skool Kick
78	Tamborine 2	TR909 D.TomL	CR78 Tamb	Conga Lo Op	MG Zap 11	Dance Kick
79	MG Zap 2	Jazz Tom M	MG Zap 2	Conga Hi Op	Laser	HipHop Kick1
80	Cowbell Low	TR909 D.TomM	JD Sm Metal	Triangle Mt	MG Zap 4	HipHop Kick2
81	MG Zap 6	Jazz Tom H	MG Zap 6	Triangle Op	Crotale	Pin Kick
82	Cowbell Hi	TR909 D.TomH	Syn Swt Atk1	Cabasa Cut	MG Zap 6	Low Kick 2
83	MG Zap 7	AnalogKick 3	MG Zap 7	R8 Shaker 1	Syn Low Atk2	Low Kick 3
C6 84	Conga Hi Mt	AnalogKick 5	808 Maracas	AnalogKick 1	808 Maracas	AnalogKick 1
85	Conga Lo Mt	Happy Clap	TR808 Claves	PlasticKick2	TR808 Claves	PlasticKick2
86	Conga Lo Slp	TR808 Snr 7	Triangle Mt	PlasticKick3	Triangle Mt	PlasticKick3
87	Conga Hi Op	TR808 Snr 3	Triangle Op	TR909 Kick 1	Triangle Op	TR909 Kick 1
88	Conga Lo Op	TR909 Snr 6	Euro Hit	AnalogKick 4	Udo	TR909 Kick 2
89	Timbale Hi	TR909 CHH 2	Scratch 4	AnalogKick 6	Conga Thumb	AnalogKick 2
90	Timbale Low	TR606 DstCHH	Easy Gtr	TR909 Snr 2	Easy Gtr A	TR909 Kick 3
91	Agogo Bell H	Dance CHH	Crotale	TR909 Snr 4	Digi Loop 1	AnalogKick 3
92	Agogo Bell L	TR606 PHH 2	MG Zap 4	TR909 Snr 5	MG Zap 4	AnalogKick 4
93	Cabasa Down	TR909 OHH 2	Urbn Sn Roll	TR909 Snr 6	Urbn Sn Roll	AnalogKick 5
94	Maracas	TR606 OHH	Calc.Saw	TR808 Snr 1	Calc.Saw	AnalogKick 6
95	Guiro Short	CR78 OHH	White Noise	TR808 Snr 2	White Noise	TR606DstKick
C7 96	Guiro Long	106SubOsc HD	Polishing Nz	TR808 CHH 1	Polishing Nz	TR808 Kick
97	Claves	TR909 Snr 6	TablaBayam 7	TR808 OHH 1	TablaBayam 7	TR909 Kick 4
98	Wood Block L	MG Blip	TablaBayam 6	TR909 CHH 2	Scream	TR909 Kick 5
99	Wood Block H	JD EML 5th	Cajon 1	TR909 OHH 2	Cajon 1	SH32 Kick
100	Triangle Mt	TR707 Clap	Filtered Hit	Lite CHH	Filtered Hit	TR707 Kick
101	Triangle Op	Dist Clap	Laugh	Lite OHH	Laugh	TR909 Kick 6
102	Castanet	MG Zap 5	Office Phone	TR606 Cym	ConcertBD Lp	Roll Kick
103	Whistle	MG Zap 7	AnalogKick 6	China Cymbal	Timpani Lp	-----

PRST (Preset Group)

Note No.	025 Snare Menu 1	026 Snare Menu 2	027 HiHat Menu	028 Rim&Tom Menu	029 Clp&Cym&Hit	030 FX/SFX Menu
28	Reg.Snr1 p	-----	-----	-----	-----	-----
29	Reg.Snr1 mf	-----	-----	-----	-----	-----
30	Reg.Snr1 f	-----	-----	-----	-----	-----
31	Reg.Snr1 ff	-----	Reg.CHH 1 p	-----	-----	-----
32	Reg.Snr1	-----	Reg.CHH 1 mf	-----	-----	-----
33	Reg.Snr2 p	-----	Reg.CHH 1 f	-----	-----	-----
34	Reg.Snr2 f	-----	Reg.CHH 1 ff	-----	-----	-----
35	Reg.Snr2 ff	Grit Snr 1	Reg.CHH 1	Reg.Stick	Hand Clap	MG Zap 1
C2 36	Reg.Snr2	Grit Snr 2	Reg.CHH 2 mf	Soft Stick	Club Clap	MG Zap 2
37	Reg.Snr Flm	Grit Snr 3	Reg.CHH 2 f	Hard Stick	Short Clap	MG Zap 3
38	Amb.Snr1 p	Grit Snr 4	Reg.CHH 2 ff	Wild Stick	Real Clap	MG Zap 4
39	Amb.Snr1 f	LoBit SnrFlm	Reg.CHH 2	Rock Stick	Bright Clap	MG Zap 5
40	Amb.Snr1	Lo-Bit Snr 1	Rock CHH1 mf	Lo-Bit Stk 1	R8 Clap	MG Zap 6
41	Amb.Snr2 p	Lo-Bit Snr 2	Rock CHH1 f	Lo-Bit Stk 2	Gospel Clap	MG Zap 7
42	Amb.Snr2 f	Lo-Bit Snr 3	Rock CHH1	Lo-Bit Stk 3	Amb Clap	MG Zap 8
43	Piccolo Snr	BmbCmp Snr	Rock CHH2 mf	Lo-Bit Stk 4	Hip Clap	MG Zap 9
44	Maple Snr	MrchCmp Snr	Rock CHH2 f	Dry Stick 1	Funk Clap	MG Zap 10
45	Natural Snr1	Frenzy Snr 1	Rock CHH2	Dry Stick 2	Group Clap	MG Zap 11
46	Natural Snr2	Frenzy Snr 2	Rock PHH	Dry Stick 3	Claptail	MG Blip
47	Dry Snr p	Slap Snr 1	Lo-Bit CHH 1	Click Snr p	Planet Clap	Beam HiQ
C3 48	Dry Snr f	Keen Snr 1	Lo-Bit CHH 2	Click Snr f	Royal Clap	MG Attack
49	Ballad Snr	Reggae Snr	Lo-Bit CHH 3	Click Snr ff	Happy Clap	Syn Low Atk1
50	Light Snr p	DR660 Snr	Lo-Bit CHH 4	Dry Stick 4	TR808 Clap 1	Syn Low Atk2
51	Light Snr f	Pop Snr p	Lo-Bit CHH 5	Dry Stick 5	Disc Clap	Syn Hrd Atk1
52	Light Snr ff	Pop Snr f	Modern CHH	R8 Comp Rim	Dist Clap	Syn Hrd Atk2
53	Light SnrRim	Pop Snr Rim	HipHop CHH 1	R&B Rim 1	Old Clap	Syn Hrd Atk3
54	Rock Snr p	Pop Snr	Urban CHH	R&B Rim 2	TR909 Clap 1	Syn Hrd Atk4
55	Rock Snr mf	Med Snare	Bang CHH	R&B Rim 3	TR909 Clap 2	Syn Mtl Atk1
56	Rock Snr f	Jngl pkt Snr	LowDwn CHH	Neck Rim	TR808 Clap 2	Syn Mtl Atk2
57	Rock Snr	Pocket Snr	Disc CHH	Swag Rim	TR707 Clap	Syn Swt Atk1
58	Rock Rim p	Flange Snr	Club CHH 1	Step Rim	Cheap Clap	Syn Swt Atk2
59	Rock Rim mf	Slap Snr 2	HipHop CHH 2	R&B Rim 4	Crash Cym1 p	Syn Swt Atk3
C4 60	Rock Rim f	Analog Snr 1	TR909 CHH 1	Street Rim	Crash Cym1 f	Syn Swt Atk4
61	Rock Rim	Analog Snr 2	TR909 CHH 2	Regular Rim	Crash Cym 1	Syn Swt Atk5
62	Reg.SnrGst	Analog Snr 3	Shaky CHH	TR909 Rim	Crash Cym 2	Syn Swt Atk6
63	Rock Snr Gst	Jam Snr	Club CHH 2	TR808 Rim	Rock Crash 1	Syn Swt Atk7
64	Sft Snr Gst	Back Snr	TR808 CHH 1	Reg.F.Tom p	Rock Crash 2	R8 Click
65	Jazz Snr p	Keen Snr 2	TR808 CHH 2	Reg.F.Tom f	Splash Cym	MC500 Beep 1
66	Jazz Snr mf	Boys Snr 1	TR606 CHH 1	Reg.F.Tom	Jazz Crash	MC500 Beep 2
67	Jazz Snr f	Slap Snr 3	TR606 CHH 2	Reg.L.Tom p	TR909 Crash	DR202 Beep
68	Jazz Snr ff	Neck Snr	TR606 DstCHH	Reg.L.Tom f	TR606 Cym	JD Switch
69	Jazz Snr	Artful Snr	Lite CHH	Reg.L.Tom	Ride Cymbal	Cutting Nz
70	Jazz Rim p	Pin Snr	CR78 CHH	Reg.M.Tom p	Ride Bell	Vinyl Noise
71	Jazz Rim mf	Chemical Snr	DR55 CHH	Reg.M.Tom f	Rock Rd Cup	Applause
C5 72	Jazz Rim f	Sizzle Snr	Neck CHH	Reg.M.Tom	Rock Rd Edge	River
73	Jazz Rim ff	Tiny Snare	Dance CHH	Reg.H.Tom p	Jazz Ride p	Thunder
74	Jazz Rim	R&B Snare 1	Reg.PHH mf	Reg.H.Tom f	Jazz Ride mf	Monsoon
75	Jz Brsh Slap	R&B Snare 2	Reg.PHH f	Reg.H.Tom	TR909 Ride	Stream
76	Jz Brsh Swsh	Cross Snr	Reg.PHH	Reg.L.TomFlm	TR707 Ride	Bubble
77	Swish&Turn p	Grave Snr	Street PHH	Reg.M.TomFlm	China Cymbal	Bird Song
78	Swish&Turn f	Boys Snr 2	Swallow PHH	Reg.H.TomFlm	Concert Cym	Dog Bark
79	Swish&Turn	Boys Snr 3	Hip PHH	Jazz Lo Tom	ClassicHseHt	Gallop
80	Snr Roll	Low Down Snr	TR909 PHH 1	Jazz Mid Tom	OrangeHit 1	Vint.Phone
81	Snr Roll Lp	TR909 Snr 1	TR909 PHH 2	Jazz Hi Tom	OrangeHit 2	Office Phone
82	Soft Jz Roll	TR909 Snr 2	TR808 PHH	Jazz Lo Flm	OrangeHit 3	Mobile Phone
83	BrushRoll Lp	TR909 Snr 3	TR606 PHH 1	Jazz Mid Flm	7th Hit	Door Creak
C6 84	GoodOld Snr1	TR909 Snr 4	TR606 PHH 2	Jazz Hi Flm	Brassy Hit	Door Slam
85	GoodOld Snr2	TR909 Snr 5	Lo-Bit PHH	Sharp Lo Tom	Drive Hit	Car Engine
86	GoodOld Snr3	TR909 Snr 6	Lo-Bit OHH 1	Sharp Hi Tom	Filtered Hit	Car Slip
87	GoodOld Snr4	TR808 Snr 1	Rock OHH	Dry Lo Tom	Mild Hit	Car Pass
88	GoodOld Snr5	TR808 Snr 2	Reg.OHH mf	Dry Hi Tom	Narrow Hit 1	Crash Seq.
89	GoodOld Snr6	TR808 Snr 3	Reg.OHH f	TR909 Tom	Narrow Hit 2	Gun Shot
90	Dirty Snr 1	TR808 Snr 4	Reg.OHH ff	TR909 DstTom	Euro Hit	Siren
91	Dirty Snr 2	Lite Snare	Reg.OHH	TR808 Tom	Dist Hit	Train Pass
92	Dirty Snr 3	TR808 Snr 5	Lo-Bit OHH 2	TR606 Tom	Thin Beef	Airplane
93	Dirty Snr 4	TR808 Snr 6	Lo-Bit OHH 3	Deep Tom	Tao Hit	Laugh
94	Dirty Snr 5	TR808 Snr 7	Neck OHH	-----	Smear Hit 1	Scream
95	Dirty Snr 6	TR606 Snr 1	Bang OHH	-----	Philly Hit	Punch
C7 96	Dirty Snr 7	TR606 Snr 2	HipHop OHH	-----	Smear Hit 2	Heartbeat
97	Dirty Snr 8	CR78 Snare	TR909 OHH 1	-----	LoFi Min Hit	Footsteps
98	Dirty Snr 9	Urbn Sn Roll	TR909 OHH 2	-----	Orch. Hit	Machine Gun
99	Dirty Snr 10	Jngl SnrRoll	TR808 OHH 1	-----	Punch Hit	Laser
100	-----	-----	TR808 OHH 2	-----	O'Skool Hit	Thunder Lp
101	-----	-----	TR606 OHH	-----	-----	Metro Bell
102	-----	-----	Lite OHH	-----	-----	Metro Click
103	-----	-----	CR78 OHH	-----	-----	-----

Rhythm Set List

PRST (Preset Group)

Note No.	031 Percussion	032 Scrh&Voi&Wld	033 Xantom Kit	034 PassionDrums	035 Arpeggiate!?	036 De Facto Kit
28	-----	-----	Xantom AKick	SH32 Kick	MaxLow Kick3	SBF Nz Lp
29	-----	-----	Xantom BKick	JD EML 5th	Rk CmpKick	Metal Vox L2
30	-----	-----	Xantom CKick	AnalogKick 6	Gospel Clap	Org Leakage
31	-----	-----	Xantom DKick	Low Kick 2	Boys Kick	Gallop
32	-----	-----	Xantom EKick	Low Kick 3	Snr Roll	Org Click 1
33	-----	-----	Xantom FKick	Back Kick	HipHop Kick2	Thunder
34	-----	-----	Xantom GKick	Car Pass	Reg.PHH	River
35	Finger Snap	Scratch 1	Xantom HKick	PlasticKick3	Reg.Kick	MG Noise Fx
C2 36	Club FinSnap	Scratch 2	Xantom IKick	TR909 Kick 4	Frenzy Kick	Heartbeat
37	Single Snap	Scratch 3	Xantom BClap	R&B Rim 2	Vinyl Kick	Car Slip
38	Snap	Scratch 4	Xantom ASnar	TR909 Snr 5	Boys Kick	Crash Seq.
39	Group Snap	Scratch 5	Xantom RStck	Back Snr	Reg.Kick	Car Pass
40	Cowbell	Scratch 6	Xantom BSnar	Boys Snr 2	Reg.Kick	Gun Shot
41	Cowbell Mute	Scratch 7	Xantom DTomL	Reg.L.Tom	Low Kick 2	Train Pass
42	Wood Block	Scratch 8	Xantom RCHH	TR606 CHH 2	TR909 Kick 3	Airplane
43	Claves	Scratch 9	Xantom DTomL	Reg.M.Tom	Conga Hi Mt	Laugh
44	TR808 Claves	Scratch 10	Xantom RCHH	Lo-Bit PHH	Jz Slap Bass	Scream
45	CR78 Beat	Vox Kick 1	Xantom DTomM	Reg.F.Tom	Gtr Cut 3	Car Engine
46	Castanet	Vox Kick 2	Xantom RCHH	Lite OHH	Scratch 1	Door Slam
47	Whistle	VoxKickSweep	Xantom DTomM	Reg.M.Tom	Scratch 7	Footsteps
C3 48	Bongo Hi Mt	Vox Snare 1	Xantom DTomH	ConcertBD	Syn Swt Atk1	Machine Gun
49	Bongo Hi Slp	Vox Snare 2	Xantom RCrsh	Crash Cym 2	TablaBayam 1	Laser
50	Bongo Lo Slp	Vox Hihat 1	Xantom DTomH	Reg.H.Tom	Udo	DistGtr Nz 2
51	Bongo Hi Op	Vox Hihat 2	Xantom CRide	Jazz Ride	VoxKickSweep	Ac.Bass Nz 2
52	Bongo Lo Op	Vox Hihat 3	Xantom JCrsh	TR909 Kick 3	Vox Hihat 1	Punch
53	Conga Hi Mt	Vox Cymbal	Xantom CCrsh	Disc CHH	Cowbell	DistGtr Nz 1
54	Conga Lo Mt	Pa!	Xantom Noise	CR78 Tamb	Bongo Hi Mt	DistGtr Nz 3
55	Conga Hi Slp	Chiki!	Xantom RCup	Bang CHH	ClassicHseHt	GtrStroke Nz
56	Conga Lo Slp	Aah Formant	Xantom LScra	ConcertBD Lp	Reg.CHH 1	E.Bass Nz 2
57	Conga Hi Op	Eeh Formant	Xantom CCrsh	TR909 OHH 2	Org Click 1	ClassicHseHt
58	Conga Lo Op	Iih Formant	Xantom LScra	Cowbell	Digi Breath	7th Hit
59	Conga Slp Op	Ooh Formant	Xantom JKick	TR606 Cym	SynVox Noise	OrangeHit 3
C4 60	Conga Efx	Uuh Formant	Xantom KKick	TR909 Crash	JP8 Pls 3 HD	OrangeHit 1
61	Conga Thumb	Metal Vox W1	Xantom RClap	Jazz Ride	Metal Vox W1	Brassy Hit
62	Timbale 1	Metal Vox W2	Xantom CSnar	Filtered Hit	Harmonica	Filtered Hit
63	Timbale 2	Metal Vox W3	Xantom RStck	P5 Sqr HD	Shamisen	Mild Hit
64	Cabasa Up	JD Gamelan	Xantom DSnar	Custm Sqr HD	Flute	Narrow Hit 1
65	Cabasa Down	JD Gamelan	Xantom STomH	TR808 Snr 3	Dyno Rhd mp	Euro Hit
66	Cabasa Cut	JD Gamelan	Xantom SCHH	Alpha Rave	SlwPick70s	Dist Hit
67	Maracas	JD Gamelan	Xantom STomH	Jazz Crash	Cln Gtr Cut	Thin Beef
68	808 Maracas	JD Gamelan	Xantom SPHH	Funk Clap	Hard Clav	Tao Hit
69	R8 Shaker 1	JD Gamelan	Xantom STomH	TR909 CHH 2	TVF Trigger	Smear Hit 1
70	R8 Shaker 2	JD Gamelan	Xantom SOHH	TR909 OHH 2	Applause	Smear Hit 2
71	Shaker 1	JD Gamelan	Xantom STomH	Mute Tp	Euro Hit	LoFi Min Hit
C5 72	Shaker 2	JD Gamelan	Xantom STomH	Ride Cymbal	MG Zap 1	Orch. Hit
73	Bone Shake	JD Gamelan	Xantom RevON	MrchCmp Snr	Syn Swt Atk2	Punch Hit
74	CR78 Guiro	JD Gamelan	Xantom STomH	Pick Kick	Syn Hrd Atk2	O'Skool Hit
75	Guiro 1	JD Gamelan	Xantom RevOF	Lo-Bit Stk 1	GtrStroke Nz	Philly Hit
76	Guiro 2	TablaBayam 1	Xantom ATabl	TR909 Snr 3	JDStrikePole	Scratch 2
77	Guiro Long	TablaBayam 2	Xantom BTabl	Claptail	Vint.Phone	Scratch 3
78	TR727Quijada	TablaBayam 3	Xantom CTabl	Siren	DistGtr Nz 1	Scratch 4
79	Vibraslap	TablaBayam 4	Xantom DTabl	TR808 OHH 1	Reg.M.Tom	Scratch 5
80	Tamborine 1	TablaBayam 5	Xantom SDrum	Rk CmpKick	Jazz Lo Tom	Scratch 8
81	Tamborine 2	TablaBayam 6	Xantom AUdu	TR606 CHH 2	Reg.L.TomFlm	Scratch 9
82	Tamborine 3	TablaBayam 7	Xantom AUdu	Syn Low Atk1	TR909 Clap 2	Scratch 10
83	CR78 Tamb	Cajon 1	Xantom AUdu	Low White Nz	Vox Snare 1	MG Zap 1
C6 84	Timpani p	Cajon 2	Xantom ACong	MG Zap 9	Cabasa Down	MG Zap 10
85	Timpani f	Cajon 3	Xantom ACong	Happy Clap	SprgDrm Hit	MG Zap 2
86	Timpani Roll	Udo	Xantom ACong	TR808 Snr 7	Digital Vox	Syn Low Atk1
87	Timpani Lp	Udu Pot Hi	Xantom ACong	TR808 Snr 3	JD Nasty	Syn Hrd Atk2
88	ConcertBD p	Udu Pot Slp	Xantom ACong	TR808 Snr 2	Vib Wave	Syn Hrd Atk3
89	ConcertBD f	SprgDrm Hit	Xantom AHitL	Club CHH 2	Kalimba	Syn Hrd Atk4
90	ConcertBD ff	Op Pandeiro	Xantom AHitL	CR78 OHH	JD Tabla	Syn Mtl Atk1
91	ConcertBD Lp	Mt Pandeiro	Xantom BHitL	LowDwn CHH	JD Log Drum	Syn Mtl Atk2
92	ConcertBD	Cuica	Xantom BHitL	Lo-Bit OHH 1	Bell Organ	Syn Swt Atk1
93	Triangle1 Mt	JD Anklungs	Xantom CHitL	TR909 OHH 2	Gtr Cut 1	Syn Swt Atk2
94	Triangle1 Op	-----	Xantom CHitU	TR606 OHH	Eeh Formant	Syn Swt Atk4
95	Triangle2 Mt	-----	Xantom DHit	CR78 OHH	Xylo Seq.	Syn Swt Atk5
C7 96	Triangle2 Op	-----	Xantom ESnar	106SubOsc HD	Gun Shot	Vox Kick 2
97	Tibet Cymbal	-----	Xantom FSnar	TR909 Snr 6	TablaBayam 3	VoxKickSweep
98	Slight Bell	-----	Xantom GSnar	AnalogKick 3	TablaBayam 4	Vox Snare 2
99	Wind Chime	-----	Xantom ISnar	MG Bass 2	TablaBayam 5	Vox Cymbal
100	Crotale	-----	Xantom ISnar	TR808 Clap 1	TablaBayam 6	Pa!
101	Agogo Bell H	-----	Xantom JSnar	Dist Clap	Wind Chime	Chiki!
102	Agogo Bell L	-----	Xantom KSnar	Super Saw	Tibet Cymbal	MC500 Beep 2
103	-----	-----	Xantom HSnar	MG Zap 7	Slight Bell	MC500 Beep 1

GM (GM2 Group)

Note No.	001 (PC: 1) GM2 STANDARD	002 (PC: 9) GM2 ROOM	003 (PC: 17) GM2 POWER	004 (PC: 25) GM2 ELECTRIC	005 (PC: 26) GM2 ANALOG	006 (PC: 33) GM2 JAZZ
27	High-Q	High-Q	High-Q	High-Q	High-Q	High-Q
28	Slap	Slap	Slap	Slap	Slap	Slap
29	ScratchPush	ScratchPush	ScratchPush	ScratchPush	ScratchPush	ScratchPush
30	ScratchPull	ScratchPull	ScratchPull	ScratchPull	ScratchPull	ScratchPull
31	Sticks	Sticks	Sticks	Sticks	Sticks	Sticks
32	SquareClick	SquareClick	SquareClick	SquareClick	SquareClick	SquareClick
33	Mtrnm.Click	Mtrnm.Click	Mtrnm.Click	Mtrnm.Click	Mtrnm.Click	Mtrnm.Click
34	Mtrnm. Bell	Mtrnm. Bell	Mtrnm. Bell	Mtrnm. Bell	Mtrnm. Bell	Mtrnm. Bell
35	Mix Kick	Mix Kick	Mix Kick	Mix Kick	Mix Kick	Jazz Kick 2
C2 36	Standard KK1	Standard KK1	Power Kick1	Elec Kick 1	TR-808 Kick	Jazz Kick 1
37	Side Stick	Side Stick	Side Stick	Side Stick	808 Rimshot	Side Stick
38	Standard SN1	Standard SN1	Dance Snare1	Elec. Snare	808 Snare 1	Standard SN1
39	909 HandClap	909 HandClap	909 HandClap	909 HandClap	909 HandClap	909 HandClap
40	Elec Snare 3	Elec Snare 3	Elec Snare 3	Elec Snare 2	Elec Snare 3	Elec Snare 3
41	Real Tom 6	Room Tom 5	Rock Tom 4	Synth Drum 2	808 Tom 2	Real Tom 6
42	Close HiHat2	Close HiHat2	Close HiHat2	Close HiHat2	TR-808 CHH	Close HiHat2
43	Real Tom 6	Room Tom 5	Rock Tom 4	Synth Drum 2	808 Tom 2	Real Tom 6
44	Pedal HiHat2	Pedal HiHat2	Pedal HiHat2	Pedal HiHat2	808__chh	Pedal HiHat2
45	Real Tom 4	Room Tom 2	Rock Tom 4	Synth Drum 2	808 Tom 2	Real Tom 4
46	Open HiHat2	Open HiHat2	Open HiHat2	Open HiHat2	TR-808 OHH	Open HiHat2
47	Real Tom 4	Room Tom 2	Rock Tom 4	Synth Drum 2	808 Tom 2	Real Tom 4
C3 48	Real Tom 1	Room Tom 2	Rock Tom 1	Synth Drum 2	808 Tom 2	Real Tom 1
49	Crash Cym.1	Crash Cym.1	Crash Cym.1	Crash Cym.1	808 Crash	Crash Cym.1
50	Real Tom 1	Room Tom 2	Rock Tom 1	Synth Drum 2	808 Tom 2	Real Tom 1
51	Ride Cymbal	Ride Cymbal	Ride Cymbal	Ride Cymbal	Ride Cymbal	Ride Cymbal
52	ChinaCymbal	ChinaCymbal	ChinaCymbal	ReverseCymbl	ChinaCymbal	ChinaCymbal
53	Ride Bell	Ride Bell	Ride Bell	Ride Bell	Ride Bell	Ride Bell
54	Tambourine	Tambourine	Tambourine	Tambourine	Tambourine	Tambourine
55	Splash Cym.	Splash Cym.	Splash Cym.	Splash Cym.	Splash Cym.	Splash Cym.
56	Cowbell	Cowbell	Cowbell	Cowbell	808cowbe	Cowbell
57	Crash Cym.2	Crash Cym.2	Crash Cym.2	Crash Cym.2	Crash Cym.2	Crash Cym.2
58	Vibraslap	Vibraslap	Vibraslap	Vibraslap	Vibraslap	Vibraslap
59	Ride Cymbal	Ride Cymbal	Ride Cymbal	Ride Cymbal	Ride Cymbal	Ride Cymbal
C4 60	Bongo High	Bongo High	Bongo High	Bongo High	Bongo High	Bongo High
61	Bongo Lo	Bongo Lo	Bongo Lo	Bongo Lo	Bongo Lo	Bongo Lo
62	Mute H.Conga	Mute H.Conga	Mute H.Conga	Mute H.Conga	808 Conga	Mute H.Conga
63	Conga Hi Opn	Conga Hi Opn	Conga Hi Opn	Conga Hi Opn	808 Conga	Conga Hi Opn
64	Conga Lo Opn	Conga Lo Opn	Conga Lo Opn	Conga Lo Opn	808 Conga	Conga Lo Opn
65	High Timbale	High Timbale	High Timbale	High Timbale	High Timbale	High Timbale
66	Low Timbale	Low Timbale	Low Timbale	Low Timbale	Low Timbale	Low Timbale
67	Agogo	Agogo	Agogo	Agogo	Agogo	Agogo
68	Agogo	Agogo	Agogo	Agogo	Agogo	Agogo
69	Cabasa	Cabasa	Cabasa	Cabasa	Cabasa	Cabasa
70	Maracas	Maracas	Maracas	Maracas	808marac	Maracas
71	ShrtWhistle	ShrtWhistle	ShrtWhistle	ShrtWhistle	ShrtWhistle	ShrtWhistle
C5 72	LongWhistle	LongWhistle	LongWhistle	LongWhistle	LongWhistle	LongWhistle
73	Short Guiro	Short Guiro	Short Guiro	Short Guiro	Short Guiro	Short Guiro
74	Long Guiro	Long Guiro	Long Guiro	Long Guiro	Long Guiro	Long Guiro
75	Claves	Claves	Claves	Claves	808clave	Claves
76	Woodblock	Woodblock	Woodblock	Woodblock	Woodblock	Woodblock
77	Woodblock	Woodblock	Woodblock	Woodblock	Woodblock	Woodblock
78	Mute Cuica	Mute Cuica	Mute Cuica	Mute Cuica	Mute Cuica	Mute Cuica
79	Open Cuica	Open Cuica	Open Cuica	Open Cuica	Open Cuica	Open Cuica
80	MuteTriangl	MuteTriangl	MuteTriangl	MuteTriangl	MuteTriangl	MuteTriangl
81	OpenTriangl	OpenTriangl	OpenTriangl	OpenTriangl	OpenTriangl	OpenTriangl
82	Shaker	Shaker	Shaker	Shaker	Shaker	Shaker
83	Jingle Bell	Jingle Bell	Jingle Bell	Jingle Bell	Jingle Bell	Jingle Bell
C6 84	Bell Tree	Bell Tree	Bell Tree	Bell Tree	Bell Tree	Bell Tree
85	Castanets	Castanets	Castanets	Castanets	Castanets	Castanets
86	Mute Surdo	Mute Surdo	Mute Surdo	Mute Surdo	Mute Surdo	Mute Surdo
87	Open Surdo	Open Surdo	Open Surdo	Open Surdo	Open Surdo	Open Surdo
88	-----	-----	-----	-----	-----	-----

PC: Program Change Number Bank Select MSB is all 120, LSB is all 0

Rhythm Set List

GM (GM2 Group)

Note No.	007 (PC: 41) GM2 BRUSH	008 (PC: 49) GM2 ORCHSTRA	009 (PC: 57) GM2 SFX
27	High-Q	Close HiHat2	-----
28	Slap	Pedal HiHat2	-----
29	ScratchPush	Open HiHat2	-----
30	ScratchPull	Ride Cymbal	-----
31	Sticks	Sticks	-----
32	SquareClick	SquareClick	-----
33	Mtrnm.Click	Mtrnm.Click	-----
34	Mtrnm. Bell	Mtrnm. Bell	-----
35	Jazz Kick 2	Concert BD	-----
C2 36	Jazz Kick 1	ConcertBD Mt	-----
37	Side Stick	Side Stick	-----
38	Brush Swirl	Concert Snr	-----
39	Brush Slap1	Castanets	High-Q
40	Brush Swirl	Concert Snr	Slap
41	Real Tom 6	Timpani	ScratchPush
42	Close HiHat2	Timpani	ScratchPull
43	Real Tom 6	Timpani	Sticks
44	Pedal HiHat2	Timpani	SquareClick
45	Real Tom 4	Timpani	Mtrnm.Click
46	Open HiHat2	Timpani	Mtrnm. Bell
47	Real Tom 4	Timpani	Gt.FretNoiz
C3 48	Real Tom 1	Timpani	Gt.CutNoise
49	Crash Cym.1	Timpani	Gt.CutNoise
50	Real Tom 1	Timpani	String Slap
51	Ride Cymbal	Timpani	Fl.KeyClick
52	ChinaCymbal	Timpani	Laughing
53	Ride Bell	Timpani	Screaming
54	Tambourine	Tambourine	Punch
55	Splash Cym.	Splash Cym.	Heart Beat
56	Cowbell	Cowbell	Footsteps
57	Crash Cym.2	Con.Cymbal2	Footsteps
58	Vibraslap	Vibraslap	Applause
59	Ride Cymbal	Concert Cym.	Creaking
C4 60	Bongo High	Bongo High	Door
61	Bongo Lo	Bongo Lo	Scratch
62	Mute H.Conga	Mute H.Conga	Wind Chimes
63	Conga Hi Opn	Conga Hi Opn	Car-Engine
64	Conga Lo Opn	Conga Lo Opn	Car-Stop
65	High Timbale	High Timbale	Car-Pass
66	Low Timbale	Low Timbale	Car-Crash
67	Agogo	Agogo	Siren
68	Agogo	Agogo	Train
69	Cabasa	Cabasa	Jetplane
70	Maracas	Maracas	Helicopter
71	ShrtWhistle	ShrtWhistle	Starship
C5 72	LongWhistle	LongWhistle	Gun Shot
73	Short Guiro	Short Guiro	Machine Gun
74	Long Guiro	Long Guiro	Lasergun
75	Claves	Claves	Explosion
76	Woodblock	Woodblock	Dog
77	Woodblock	Woodblock	HorseGallop
78	Mute Cuica	Mute Cuica	Bird
79	Open Cuica	Open Cuica	Rain
80	MuteTriangl	MuteTriangl	Thunder
81	OpenTriangl	OpenTriangl	Wind
82	Shaker	Shaker	Seashore
83	Jingle Bell	Jingle Bell	Stream
C6 84	Bell Tree	Bell Tree	Bubble
85	Castanets	Castanets	-----
86	Mute Surdo	Mute Surdo	-----
87	Open Surdo	Open Surdo	-----
88	-----	Applause	-----

PC: Program Change Number Bank Select MSB is all 120, LSB is all 0

Waveform List

No.	Wave Name
0001	Ac.Pno p A L
0002	Ac.Pno p A R
0003	Ac.Pno p B L
0004	Ac.Pno p B R
0005	Ac.Pno p C L
0006	Ac.Pno p C R
0007	Ac.Pno f A L
0008	Ac.Pno f A R
0009	Ac.Pno f B L
0010	Ac.Pno f B R
0011	Ac.Pno f C L
0012	Ac.Pno f C R
0013	JD Piano A
0014	JD Piano B
0015	JD Piano C
0016	Piano Atk Nz
0017	MKS Piano A
0018	MKS Piano B
0019	MKS Piano C
0020	Stage EP p A
0021	Stage EP p B
0022	Stage EP p C
0023	Stage EP f A
0024	Stage EP f B
0025	Stage EP f C
0026	Tine EP p A
0027	Tine EP p B
0028	Tine EP p C
0029	Tine EP mf A
0030	Tine EP mf B
0031	Tine EP mf C
0032	Tine EP ff A
0033	Tine EP ff B
0034	Tine EP ff C
0035	Dyno EP mp A
0036	Dyno EP mp B
0037	Dyno EP mp C
0038	Dyno EP mf A
0039	Dyno EP mf B
0040	Dyno EP mf C
0041	Dyno EP ff A
0042	Dyno EP ff B
0043	Dyno EP ff C
0044	Wurly mp A
0045	Wurly mp B
0046	Wurly mp C
0047	Wurly mf A
0048	Wurly mf B
0049	Wurly mf C
0050	Wurly ff A
0051	Wurly ff B
0052	Wurly ff C
0053	Lo-Fi Wurly
0054	Soft SA EP A
0055	Soft SA EP B
0056	Soft SA EP C
0057	Hard SA EP A
0058	Hard SA EP B
0059	Hard SA EP C
0060	SA EP Ens A
0061	SA EP Ens B
0062	SA EP Ens C
0063	SA E.Piano A
0064	SA E.Piano B
0065	SA E.Piano C
0066	80's E.Pno 1
0067	80's E.Pno 2
0068	Hard E.Pno
0069	Celesta
0070	Music Box
0071	Reg.Clav A
0072	Reg.Clav B
0073	Reg.Clav C
0074	Retro Clav A
0075	Retro Clav B
0076	Retro Clav C
0077	Tight Clav A
0078	Tight Clav B
0079	Tight Clav C
0080	Hard Clav A
0081	Hard Clav B
0082	Hard Clav C
0083	JD Clav
0084	Harpsi A
0085	Harpsi B
0086	Harpsi C
0087	JD Full Draw
0088	Org Basic 1
0089	Org Basic 2
0090	Ballad Org
0091	3rd Perc Org
0092	Lo-Fi Organ
0093	Perc Organ 1
0094	Perc Organ 2
0095	Rock Organ A
0096	Rock Organ B
0097	Rock Organ C
0098	RtryOrg1 A L
0099	RtryOrg1 A R
0100	RtryOrg1 B L
0101	RtryOrg1 B R
0102	RtryOrg1 C L
0103	RtryOrg1 C R
0104	RtryOrg2 A L
0105	RtryOrg2 A R
0106	RtryOrg2 B L
0107	RtryOrg2 B R
0108	RtryOrg2 C L
0109	RtryOrg2 C R
0110	LoFi RtryOrg
0111	Vint.Org 1
0112	Vint.Org 2
0113	Vint.Org 3
0114	Vint.Org 4
0115	Lite Dst Org
0116	Positive '8
0117	Pipe Organ
0118	Cathedrl Org
0119	Nylon Gtr1 A
0120	Nylon Gtr1 B
0121	Nylon Gtr1 C
0122	Nylon Gtr2 A
0123	Nylon Gtr2 B
0124	Nylon Gtr2 C
0125	Bright Gtr A
0126	Bright Gtr B
0127	Bright Gtr C
0128	Ac.Gtr mp A
0129	Ac.Gtr mp B
0130	Ac.Gtr mp C
0131	Ac.Gtr mf A
0132	Ac.Gtr mf B
0133	Ac.Gtr mf C
0134	Ac.Gtr ff A
0135	Ac.Gtr ff B
0136	Ac.Gtr ff C
0137	Ac.Gtr Sld A
0138	Ac.Gtr Sld B
0139	Ac.Gtr Sld C
0140	Ac.Gtr Hrm A
0141	Ac.Gtr Hrm B
0142	Ac.Gtr Hrm C
0143	Jazz Gtr A
0144	Jazz Gtr B
0145	Jazz Gtr C
0146	Clean Gtr A
0147	Clean Gtr B
0148	Clean Gtr C
0149	Clr Mt Gtr A
0150	Clr Mt Gtr B
0151	Clr Mt Gtr C
0152	E.Gtr Ld 1
0153	E.Gtr Ld 2
0154	Brt Strat A
0155	Brt Strat B
0156	Brt Strat C
0157	SlwPick70s A
0158	SlwPick70s B
0159	SlwPick70s C
0160	FstPick70s A
0161	FstPick70s B
0162	FstPick70s C
0163	Plk Strat A
0164	Plk Strat B
0165	Plk Strat C
0166	Strat Mute A
0167	Strat Mute B
0168	Strat Mute C
0169	Funk Gtr A
0170	Funk Gtr B
0171	Funk Gtr C
0172	Funk MtGtr A
0173	Funk MtGtr B
0174	Funk MtGtr C
0175	Easy Gtr A
0176	Easy Gtr B
0177	Easy Gtr C
0178	Nasty Gtr
0179	Clean TC A
0180	Clean TC B
0181	Clean TC C
0182	Overdrive A
0183	Overdrive C
0184	Distortion A
0185	Distortion B
0186	Distortion C
0187	Dist Mute A
0188	Dist Mute B
0189	Dist Mute C
0190	Dist Chord A
0191	Dist Chord B
0192	Dist Chord C
0193	Dst Gtr Riff
0194	Gtr Trill
0195	Cln Gtr Cut
0196	Gtr Cut 1
0197	Gtr Cut 2
0198	Gtr Cut 3
0199	Gtr Cut 4
0200	Wah Gtr Riff
0201	E.Gtr Harm
0202	JD ScrapeGut
0203	Harp A
0204	Harp B
0205	Harp C
0206	Banjo A
0207	Banjo B
0208	Banjo C
0209	Sitar A
0210	Sitar B
0211	Sitar C
0212	Sitar Drn A
0213	Sitar Drn B
0214	Sitar Drn C
0215	E.Sitar A
0216	E.Sitar B
0217	E.Sitar C
0218	Santur A
0219	Santur B
0220	Santur C
0221	Dulcimer A
0222	Dulcimer B
0223	Dulcimer C
0224	Shamisen A
0225	Shamisen B
0226	Shamisen C
0227	Koto A
0228	Koto B
0229	Koto C
0230	Ac.Bass A
0231	Ac.Bass B
0232	Ac.Bass C
0233	FngrCmp Bs A
0234	FngrCmp Bs B
0235	FngrCmp Bs C
0236	Finger Bs A
0237	Finger Bs B
0238	Finger Bs C
0239	Precision Bs
0240	Jz Bs Soft A
0241	Jz Bs Soft B
0242	Jz Bs Soft C
0243	6-FngBsSft A
0244	6-FngBsSft B
0245	6-FngBsSft C
0246	ThumbMtBs pA
0247	ThumbMtBs pB
0248	ThumbMtBs pC
0249	ThumbMtBs fA
0250	ThumbMtBs fB
0251	ThumbMtBs fC
0252	Fretlss Bs A
0253	Fretlss Bs B
0254	Fretlss Bs C
0255	Fretlss SftA
0256	Fretlss SftB
0257	Fretlss SftC
0258	Pick Bass 1A
0259	Pick Bass 1B
0260	Pick Bass 1C
0261	Pick Bass 2
0262	Slap Bass
0263	Slap +Pull 1
0264	Slap +Pull 2
0265	Slap +Pull 3
0266	Jz Slap Bass
0267	Jz Slp+Pull1
0268	Jz Slp+Pull2
0269	Jz Slp+Pull3
0270	MG Bass 1 A
0271	MG Bass 1 B
0272	MG Bass 1 C
0273	DistTB Sqr
0274	DistTBSqr Lp
0275	Solid Bass
0276	MG Big Bass
0277	Jungle Bass
0278	Garage Bass
0279	SH-101 Bs A
0280	SH-101 Bs B
0281	SH-101 Bs C
0282	TB Natural
0283	Poly Bass
0284	Organ Bass
0285	Voco Bass
0286	MG Bass 2 A
0287	MG Bass 2 B
0288	MG Bass 2 C
0289	MG Bass 3
0290	MG Bass 4
0291	MC Bass A
0292	MC Bass B
0293	MC Bass C
0294	Atk Syn Bass
0295	Atk Flute A
0296	Atk Flute B
0297	Atk Flute C
0298	Flute A
0299	Flute B
0300	Flute C
0301	Piccolo A
0302	Piccolo B
0303	Piccolo C
0304	Pan Flute
0305	JD Rad Hose
0306	Shakuhachi
0307	JD Fl Push
0308	Clarinet A
0309	Clarinet B
0310	Clarinet C
0311	Oboe Mezzo A
0312	Oboe Mezzo B
0313	Oboe Mezzo C
0314	Oboe Forte A
0315	Oboe Forte B
0316	Oboe Forte C
0317	E.Horn A
0318	E.Horn B
0319	E.Horn C
0320	Bassoon A
0321	Bassoon B
0322	Bassoon C
0323	Recorder A
0324	Recorder B
0325	Recorder C
0326	SopranoSax A
0327	SopranoSax B
0328	SopranoSax C
0329	Alto Sax Vib
0330	Soft Alto A
0331	Soft Alto B
0332	Soft Alto C
0333	Wide Sax A
0334	Wide Sax B
0335	Wide Sax C
0336	BreathySax A
0337	BreathySax B
0338	BreathySax C
0339	Tenor Sax A
0340	Tenor Sax B
0341	Tenor Sax C
0342	Bari.Sax 1 A
0343	Bari.Sax 1 B
0344	Bari.Sax 1 C
0345	Bari.Sax 2 A
0346	Bari.Sax 2 B
0347	Bari.Sax 2 C
0348	Musette
0349	Harmonica A
0350	Harmonica B
0351	Harmonica C
0352	Blues G-harp
0353	Flugel A
0354	Flugel B
0355	Flugel C
0356	Trumpet A
0357	Trumpet B
0358	Trumpet C
0359	Wide Tp A
0360	Wide Tp B
0361	Wide Tp C
0362	Mute Tp A
0363	Mute Tp B
0364	Mute Tp C
0365	Trombone A
0366	Trombone B
0367	Trombone C
0368	Tbn mf A
0369	Tbn mf B
0370	Tbn mf C
0371	Tuba A
0372	Tuba B
0373	Tuba C
0374	Sft F.Horn A
0375	Sft F.Horn B
0376	Sft F.Horn C
0377	French Hrn A
0378	French Hrn C
0379	F.HornSect A
0380	F.HornSect B
0381	F.HornSect C
0382	Tp Section A
0383	Tp Section B
0384	Tp Section C
0385	OctBrs p A L
0386	OctBrs p A R
0387	OctBrs p B L
0388	OctBrs p B R
0389	OctBrs p C L
0390	OctBrs p C R
0391	OctBrs f A L
0392	OctBrs f A R
0393	OctBrs f B L
0394	OctBrs f B R
0395	OctBrs f C L
0396	OctBrs f C R
0397	Brs Fall 1 L
0398	Brs Fall 1 R
0399	Brs Fall 2 L
0400	Brs Fall 2 R
0401	OrchUnis A L
0402	OrchUnis A R
0403	OrchUnis B L
0404	OrchUnis B R
0405	OrchUnis C L
0406	OrchUnis C R
0407	Violin Vib A
0408	Violin Vib B
0409	Violin Vib C
0410	Violin A
0411	Violin B
0412	Violin C
0413	Cello Vib A
0414	Cello Vib B
0415	Cello Vib C
0416	Cello A
0417	Cello B
0418	Cello C
0419	Vl Sect. A L
0420	Vl Sect. A R
0421	Vl Sect. B L
0422	Vl Sect. B R
0423	Vl Sect. C L
0424	Vl Sect. C R
0425	Vc Sect. A L
0426	Vc Sect. A R
0427	Vc Sect. B L
0428	Vc Sect. B R
0429	Vc Sect. C L
0430	Vc Sect. C R
0431	Full Str A L
0432	Full Str A R
0433	Full Str B L
0434	Full Str B R
0435	Full Str C L
0436	Full Str C R
0437	ChmbrStrAtkA
0438	ChmbrStrAtkB
0439	ChmbrStrAtkC
0440	ChmbrStrRevA
0441	ChmbrStrRevB
0442	ChmbrStrRevC
0443	Vls Pizz A
0444	Vls Pizz B
0445	Vls Pizz C
0446	VlsPizzRev A
0447	VlsPizzRev B
0448	VlsPizzRev C
0449	Vcs Pizz A
0450	Vcs Pizz B

Waveform List

No.	Wave Name
0451	Vcs Pizz C
0452	VcsPizzRev A
0453	VcsPizzRev B
0454	VcsPizzRev C
0455	Unison Saw A
0456	Unison Saw B
0457	Unison Saw C
0458	Super Saw A
0459	Super Saw B
0460	Super Saw C
0461	Trance Saw A
0462	Trance Saw B
0463	Trance Saw C
0464	Alpha Rave
0465	Saw Sync A
0466	Saw Sync B
0467	Saw Sync C
0468	Warm Pad A
0469	Warm Pad B
0470	Warm Pad C
0471	OB2 Pad 1 A
0472	OB2 Pad 1 B
0473	OB2 Pad 1 C
0474	OB2 Pad 2 A
0475	OB2 Pad 2 B
0476	OB2 Pad 2 C
0477	SBF Vox A
0478	SBF Vox B
0479	SBF Vox C
0480	Female Ahs A
0481	Female Ahs B
0482	Female Ahs C
0483	Female Oos A
0484	Female Oos B
0485	Female Oos C
0486	Male Aahs A
0487	Male Aahs B
0488	Male Aahs C
0489	Jazz Doos A
0490	Jazz Doos B
0491	Jazz Doos C
0492	Jz Doos Lp A
0493	Jz Doos Lp B
0494	Jz Doos Lp C
0495	Gospel Hum A
0496	Gospel Hum B
0497	Gospel Hum C
0498	Soprano Vox
0499	Kalimba
0500	JD Klmba Atk
0501	JD Wood Crak
0502	JD Gamelan 1
0503	JD Gamelan 2
0504	JD Gamelan 3
0505	JD Log Drum
0506	JD Hooky
0507	JD Tabla
0508	JD Xylo
0509	Marimba
0510	Vibraphone
0511	Glocken
0512	Steel Drums
0513	JD Pole Lp
0514	JD BottleHit
0515	D-50 Bell A
0516	D-50 Bell B
0517	D-50 Bell C
0518	D-50 Bell Lp
0519	Agogo Bell
0520	Finger Bell
0521	JD Cowbell
0522	Tubular Bell
0523	Church Bell
0524	Mild CanWave
0525	JD Crystal
0526	Bell Organ
0527	Old DigiBell
0528	JD Bell Wave
0529	TinyBellWave
0530	Vib Wave
0531	JD Brt Digi
0532	Med Digi
0533	Bagpipe
0534	Digital Vox
0535	JD WallyWave
0536	JD Brusky Lp
0537	Bright Form
0538	Mild Form
0539	JD Nasty
0540	Fat SparkVox

No.	Wave Name
0541	JD Spark Vox
0542	JD Cutters
0543	SBF Hrd Ld 1
0544	SBF Hrd Ld 2
0545	JD EML 5th
0546	TB303 Saw HD
0547	Custm Saw HD
0548	MG Saw HD
0549	OB2 Saw HD
0550	DigitalSawHD
0551	Calc.Saw
0552	Calc.Saw inv
0553	Synth Saw
0554	JD Syn Saw
0555	JD Fat Saw
0556	JP-8 Saw
0557	P5 Saw HD
0558	D-50 Saw
0559	Air Wave
0560	MG Sqr HD
0561	P5 Sqr HD
0562	OB2 Sqr HD
0563	Custm Sqr HD
0564	106SubOsc HD
0565	TB303 Sqr HD
0566	Fat Square
0567	JP-8 Square
0568	JP8 Pls 1 HD
0569	JP8 Pls 2 HD
0570	JP8 Pls 3 HD
0571	JP8 Pls 4 HD
0572	Syn Pulse 1
0573	Syn Pulse 2
0574	MG Tri HD
0575	700 Triangle
0576	Syn Triangle
0577	JD Triangle
0578	ARP Sine HD
0579	Sine
0580	Digi Attack
0581	JD Fine Wine
0582	Digi Loop 1
0583	Digi Loop 2
0584	JD MetalWind
0585	Atmosphere
0586	DigiSpectrum
0587	JD Vox Noise
0588	SynVox Noise
0589	Shaku Noise
0590	Digi Breath
0591	Agogo Noise
0592	Polishing Nz
0593	Dentist Nz
0594	Vinyl Noise
0595	White Noise
0596	Pink Noise
0597	SBF Cym Lp
0598	SBF Bell Lp
0599	SBF Nz Lp
0600	SBF Vox Lp
0601	Aah Formant
0602	Eeh Formant
0603	Iih Formant
0604	Ooh Formant
0605	Uuh Formant
0606	Metal Vox W1
0607	Metal Vox L1
0608	Metal Vox W2
0609	Metal Vox L2
0610	Metal Vox W3
0611	Metal Vox L3
0612	JD Rattles
0613	Xylo Seq.
0614	JD Tin Wave
0615	JD Anklungs
0616	JD Shami
0617	SynBassClick
0618	JD EP Atk
0619	EP Release
0620	Org Click 1
0621	Org Click 2
0622	Org Click 3
0623	Org Click 4
0624	Org Click 5
0625	Org Leakage
0626	MG Noise Fx
0627	JD Sm Metal
0628	JDStrikePole
0629	Ice Crash
0630	JD Switch

No.	Wave Name
0631	JD Tuba Slap
0632	JD Plink
0633	JD Plunk
0634	TVF Trigger
0635	Cutting Nz
0636	Ac.Bass Body
0637	Flute Pad Nz
0638	Applause
0639	River
0640	Thunder
0641	Monsoon
0642	Stream
0643	Bubble
0644	Bird Song
0645	Dog Bark
0646	Gallop
0647	Vint.Phone
0648	Office Phone
0649	Mobile Phone
0650	Door Creak
0651	Door Slam
0652	Car Engine
0653	Car Slip
0654	Car Pass
0655	Crash Seq.
0656	Gun Shot
0657	Siren
0658	Train Pass
0659	Airplane
0660	Space Voyage
0661	Blow Loop
0662	Laugh
0663	Scream
0664	Punch
0665	Heartbeat
0666	Footsteps
0667	Machine Gun
0668	Laser
0669	Thunder Lp
0670	Ac.Bass Nz 1
0671	Ac.Bass Nz 2
0672	E.Bass Nz 1
0673	E.Bass Nz 2
0674	E.Bass Slide
0675	DistGtr Nz 1
0676	DistGtr Nz 2
0677	DistGtr Nz 3
0678	GtrStroke Nz
0679	Gtr Fret Nz1
0680	Gtr Fret Nz2
0681	Gtr Fret Nz3
0682	ClassicHseHt
0683	OrangeHit 1
0684	OrangeHit 2
0685	OrangeHit 3
0686	7th Hit
0687	Brassy Hit
0688	Drive Hit
0689	Filtered Hit
0690	Mild Hit
0691	Narrow Hit 1
0692	Narrow Hit 2
0693	Euro Hit
0694	Dist Hit
0695	Thin Beef
0696	Tao Hit
0697	Smear Hit 1
0698	Smear Hit 2
0699	LoFi Min Hit
0700	Orch. Hit
0701	Punch Hit
0702	O'Skool Hit
0703	Philly Hit
0704	Scratch 1
0705	Scratch 2
0706	Scratch 3
0707	Scratch 4
0708	Scratch 5
0709	Scratch 6
0710	Scratch 7
0711	Scratch 8
0712	Scratch 9
0713	Scratch 10
0714	MG Zap 1
0715	MG Zap 2
0716	MG Zap 3
0717	MG Zap 4
0718	MG Zap 5
0719	MG Zap 6
0720	MG Zap 7

No.	Wave Name
0721	MG Zap 8
0722	MG Zap 9
0723	MG Zap 10
0724	MG Zap 11
0725	MG Blip
0726	Beam HiQ
0727	MG Attack
0728	Syn Low Atk1
0729	Syn Low Atk2
0730	Syn Hrd Atk1
0731	Syn Hrd Atk2
0732	Syn Hrd Atk3
0733	Syn Hrd Atk4
0734	Syn Mtl Atk1
0735	Syn Mtl Atk2
0736	Syn Swt Atk1
0737	Syn Swt Atk2
0738	Syn Swt Atk3
0739	Syn Swt Atk4
0740	Syn Swt Atk5
0741	Syn Swt Atk6
0742	Syn Swt Atk7
0743	Reg.Kick p L
0744	Reg.Kick p R
0745	Reg.Kick f L
0746	Reg.Kick f R
0747	Reg.Kick ffL
0748	Reg.Kick ffR
0749	Rock Kick p
0750	Rock Kick f
0751	Jazz Kick p
0752	Jazz Kick mf
0753	Jazz Kick f
0754	Dry Kick 1
0755	Tight Kick 1
0756	Tight Kick 2
0757	Old Kick
0758	Jz Dry Kick
0759	Bright Kick
0760	Dry Kick 2
0761	Dry Kick 3
0762	Power Kick
0763	R&B Kick L
0764	R&B Kick R
0765	Rk CmpKick L
0766	Rk CmpKick R
0767	MaxLow Kick1
0768	MaxLow Kick2
0769	MaxLow Kick3
0770	Dist Kick
0771	FB Kick
0772	Rough Kick1
0773	Rough Kick2
0774	Rough Kick3
0775	Click Kick
0776	Pick Kick
0777	Back Kick
0778	Vinyl Kick
0779	Low Kick 1
0780	Boys Kick
0781	Hippie Kick
0782	Frenzy Kick
0783	PlasticKick1
0784	Swallow Kick
0785	Neck Kick
0786	70's Kick
0787	Skool Kick
0788	Dance Kick
0789	HipHop Kick1
0790	HipHop Kick2
0791	Pin Kick
0792	Low Kick 2
0793	Low Kick 3
0794	AnalogKick 1
0795	PlasticKick2
0796	PlasticKick3
0797	TR909 Kick 1
0798	TR909 Kick 2
0799	AnalogKick 2
0800	TR909 Kick 3
0801	AnalogKick 3
0802	AnalogKick 4
0803	AnalogKick 5
0804	AnalogKick 6
0805	TR606DstKick
0806	TR808 Kick
0807	TR909 Kick 4
0808	TR909 Kick 5
0809	SH32 Kick
0810	TR707 Kick

No.	Wave Name
0811	TR909 Kick 6
0812	Roll Kick
0813	Reg.Snr1 p L
0814	Reg.Snr1 p R
0815	Reg.Snr1mf L
0816	Reg.Snr1mf R
0817	Reg.Snr1 f L
0818	Reg.Snr1 f R
0819	Reg.Snr1ff L
0820	Reg.Snr1ff R
0821	Reg.Snr2 p L
0822	Reg.Snr2 p R
0823	Reg.Snr2 f L
0824	Reg.Snr2 f R
0825	Reg.Snr2ff L
0826	Reg.Snr2ff R
0827	Reg.SnrFlm L
0828	Reg.SnrFlm R
0829	Amb.Snr1 p L
0830	Amb.Snr1 p R
0831	Amb.Snr1 f L
0832	Amb.Snr1 f R
0833	Amb.Snr2 p L
0834	Amb.Snr2 p R
0835	Amb.Snr2 f L
0836	Amb.Snr2 f R
0837	Piccolo Snr
0838	Maple Snr
0839	Natural Snr1
0840	Natural Snr2
0841	Dry Snr p
0842	Dry Snr f
0843	Ballad Snr
0844	Light Snr p
0845	Light Snr f
0846	Light Snr ff
0847	Light SnrRim
0848	Click Snr p
0849	Click Snr f
0850	Click Snr ff
0851	Rock Snr p
0852	Rock Snr mf
0853	Rock Snr f
0854	Rock Rim p
0855	Rock Rim mf
0856	Rock Rim f
0857	Reg.SnrGst L
0858	Reg.SnrGst R
0859	Rock Snr Gst
0860	Sft Snr Gst
0861	Jazz Snr p
0862	Jazz Snr mf
0863	Jazz Snr f
0864	Jazz Snr ff
0865	Jazz Rim p
0866	Jazz Rim mf
0867	Jazz Rim f
0868	Jazz Rim ff
0869	Jz Brsh Slap
0870	Jz Brsh Swsh
0871	Swish&Turn p
0872	Swish&Turn f
0873	Snr Roll
0874	Snr Roll Lp
0875	Soft Jz Roll
0876	BrushRoll Lp
0877	GoodOld Snr1
0878	GoodOld Snr2
0879	GoodOld Snr3
0880	GoodOld Snr4
0881	GoodOld Snr5
0882	GoodOld Snr6
0883	Dirty Snr 1
0884	Dirty Snr 2
0885	Dirty Snr 3
0886	Dirty Snr 4
0887	Dirty Snr 5
0888	Dirty Snr 6
0889	Dirty Snr 7
0890	Dirty Snr 8
0891	Dirty Snr 9
0892	Dirty Snr 10
0893	Grit Snr 1
0894	Grit Snr 2
0895	Grit Snr 3
0896	Grit Snr 4
0897	LoBit SnrFlm
0898	Lo-Bit Snr 1
0899	Lo-Bit Snr 2
0900	Lo-Bit Snr 3

No.	Wave Name
0901	BmbCmp Snr
0902	MrchCmp Snr
0903	Frenzy Snr 1
0904	Frenzy Snr 2
0905	Slap Snr 1
0906	Keen Snr 1
0907	Reggae Snr
0908	DR660 Snr
0909	Pop Snr p
0910	Pop Snr f
0911	Pop Snr Rim
0912	Med Snare
0913	Jngl pkt Snr
0914	Pocket Snr
0915	Flange Snr
0916	Slap Snr 2
0917	Analog Snr 1
0918	Analog Snr 2
0919	Analog Snr 3
0920	Jam Snr
0921	Back Snr
0922	Keen Snr 2
0923	Boys Snr 1
0924	Slap Snr 3
0925	Neck Snr
0926	Artful Snr
0927	Pin Snr
0928	Chemical Snr
0929	Sizzle Snr
0930	Tiny Snare
0931	R&B Snare 1
0932	R&B Snare 2
0933	Cross Snr
0934	Grave Snr
0935	Boys Snr 2
0936	Boys Snr 3
0937	Low Down Snr
0938	TR909 Snr 1
0939	TR909 Snr 2
0940	TR909 Snr 3
0941	TR909 Snr 4
0942	TR909 Snr 5
0943	TR909 Snr 6
0944	TR808 Snr 1
0945	TR808 Snr 2
0946	TR808 Snr 3
0947	TR808 Snr 4
0948	Lite Snare
0949	TR808 Snr 5
0950	TR808 Snr 6
0951	TR808 Snr 7
0952	TR606 Snr 1
0953	TR606 Snr 2
0954	CR78 Snare
0955	Urbn Sn Roll
0956	Jngl SnrRoll
0957	Reg.Stick L
0958	Reg.Stick R
0959	Soft Stick
0960	Hard Stick
0961	Wild Stick
0962	Rock Stick
0963	Lo-Bit Stk 1
0964	Lo-Bit Stk 2
0965	Lo-Bit Stk 3
0966	Lo-Bit Stk 4
0967	Dry Stick 1
0968	Dry Stick 2
0969	Dry Stick 3
0970	Dry Stick 4
0971	Dry Stick 5
0972	R8 Comp Rim
0973	R&B Rim 1
0974	R&B Rim 2
0975	R&B Rim 3
0976	Neck Rim
0977	Swag Rim
0978	Step Rim
0979	R&B Rim 4
0980	Street Rim
0981	Regular Rim
0982	TR909 Rim
0983	TR808 Rim
0984	Reg.F.Tom p
0985	Reg.F.Tom f
0986	Reg.L.Tom p
0987	Reg.L.Tom f
0988	Reg.M.Tom p
0989	Reg.M.Tom f
0990	Reg.H.Tom p

No.	Wave Name
0991	Reg.H.Tom f
0992	Reg.L.TomFlm
0993	Reg.M.TomFlm
0994	Reg.H.TomFlm
0995	Jazz Lo Tom
0996	Jazz Mid Tom
0997	Jazz Hi Tom
0998	Jazz Lo Flm
0999	Jazz Mid Flm
1000	Jazz Hi Flm
1001	Sharp Lo Tom
1002	Sharp Hi Tom
1003	Dry Lo Tom
1004	Dry Hi Tom
1005	TR909 Tom
1006	TR909 DstTom
1007	TR808 Tom
1008	TR606 Tom
1009	Deep Tom
1010	Reg.CHH 1 p
1011	Reg.CHH 1 mf
1012	Reg.CHH 1 f
1013	Reg.CHH 1 ff
1014	Reg.CHH 2 mf
1015	Reg.CHH 2 f
1016	Reg.CHH 2 ff
1017	Reg.PHH mf
1018	Reg.PHH f
1019	Reg.OHH mf
1020	Reg.OHH f
1021	Reg.OHH ff
1022	Rock CHH1 mf
1023	Rock CHH1 f
1024	Rock CHH2 mf
1025	Rock CHH2 f
1026	Rock PHH
1027	Rock OHH
1028	Lo-Bit CHH 1
1029	Lo-Bit CHH 2
1030	Lo-Bit CHH 3
1031	Lo-Bit CHH 4
1032	Lo-Bit CHH 5
1033	Modern CHH
1034	HipHop CHH 1
1035	Urban CHH
1036	Bang CHH
1037	LowDwn CHH
1038	Disc CHH
1039	Club CHH 1
1040	HipHop CHH 2
1041	TR909 CHH 1
1042	TR909 CHH 2
1043	Shaky CHH
1044	Club CHH 2
1045	TR808 CHH 1
1046	TR808 CHH 2
1047	TR606 CHH 1
1048	TR606 CHH 2
1049	TR606 DstCHH
1050	Lite CHH
1051	CR78 CHH
1052	DR55 CHH
1053	Neck CHH
1054	Dance CHH
1055	Street PHH
1056	Swallow PHH
1057	Hip PHH
1058	TR909 PHH 1
1059	TR909 PHH 2
1060	TR808 PHH
1061	TR606 PHH 1
1062	TR606 PHH 2
1063	Lo-Bit PHH
1064	Lo-Bit OHH 1
1065	Lo-Bit OHH 2
1066	Lo-Bit OHH 3
1067	Neck OHH
1068	Bang OHH
1069	HipHop OHH
1070	TR909 OHH 1
1071	TR909 OHH 2
1072	TR808 OHH 1
1073	TR808 OHH 2
1074	TR606 OHH
1075	Lite OHH
1076	CR78 OHH
1077	Crash Cym1 p
1078	Crash Cym1 f
1079	Crash Cym 2
1080	Rock Crash 1

No.	Wave Name
1081	Rock Crash 2
1082	Splash Cym
1083	Jazz Crash
1084	TR909 Crash
1085	TR606 Cym
1086	Ride Cymbal
1087	Ride Bell
1088	Rock Rd Cup
1089	Rock Rd Edge
1090	Jazz Ride p
1091	Jazz Ride mf
1092	TR909 Ride
1093	TR707 Ride
1094	China Cymbal
1095	Concert Cym
1096	Hand Clap
1097	Club Clap
1098	Short Clap
1099	Real Clap
1100	Bright Clap
1101	R8 Clap
1102	Gospel Clap
1103	Amb Clap
1104	Hip Clap
1105	Funk Clap
1106	Group Clap
1107	Claptail
1108	Planet Clap
1109	Royal Clap
1110	Happy Clap
1111	TR808 Clap 1
1112	Disc Clap
1113	Dist Clap
1114	Old Clap
1115	TR909 Clap 1
1116	TR909 Clap 2
1117	TR808 Clap 2
1118	TR707 Clap
1119	Cheap Clap
1120	Finger Snap
1121	Club FinSnap
1122	Single Snap
1123	Snap
1124	Group Snap
1125	Vox Kick 1
1126	Vox Kick 2
1127	VoxKickSweep
1128	Vox Snare 1
1129	Vox Snare 2
1130	Vox Hihat 1
1131	Vox Hihat 2
1132	Vox Hihat 3
1133	Vox Cymbal
1134	Pa!
1135	Chiki!
1136	Cowbell
1137	Cowbell Mute
1138	Wood Block
1139	Claves
1140	TR808 Claves
1141	CR78 Beat
1142	Castanet
1143	Whistle
1144	Bongo Hi Mt
1145	Bongo Hi Slp
1146	Bongo Lo Slp
1147	Bongo Hi Op
1148	Bongo Lo Op
1149	Conga Hi Mt
1150	Conga Lo Mt
1151	Conga Hi Slp
1152	Conga Lo Slp
1153	Conga Hi Op
1154	Conga Lo Op
1155	Conga Slp Op
1156	Conga Efx
1157	Conga Thumb
1158	Timbale 1
1159	Timbale 2
1160	Cabasa Up
1161	Cabasa Down
1162	Cabasa Cut
1163	Maracas
1164	808 Maracas
1165	R8 Shaker 1
1166	R8 Shaker 2
1167	Shaker 1
1168	Shaker 2
1169	Bone Shake
1170	CR78 Guiro

No.	Wave Name
1171	Guiro 1
1172	Guiro 2
1173	Guiro Long
1174	TR727Quijada
1175	Vibraslap
1176	Tamborine 1
1177	Tamborine 2
1178	Tamborine 3
1179	CR78 Tamb
1180	TablaBayam 1
1181	TablaBayam 2
1182	TablaBayam 3
1183	TablaBayam 4
1184	TablaBayam 5
1185	TablaBayam 6
1186	TablaBayam 7
1187	Cajon 1
1188	Cajon 2
1189	Cajon 3
1190	Udo
1191	Udu Pot Hi
1192	Udu Pot Slp
1193	SprgDrm Hit
1194	Op Pandeiro
1195	Mt Pandeiro
1196	Cuica
1197	Timpani p
1198	Timpani f
1199	Timpani Roll
1200	Timpani Lp
1201	ConcertBD p
1202	ConcertBD f
1203	ConcertBD ff
1204	ConcertBD Lp
1205	Triangle 1
1206	Triangle 2
1207	Tibet Cymbal
1208	Slight Bell
1209	Wind Chime
1210	Crotale
1211	R8 Click
1212	Metro Bell
1213	Metro Click
1214	MC500 Beep 1
1215	MC500 Beep 2
1216	DR202 Beep
1217	Low Saw1
1218	Low Saw1 inv
1219	Low Saw2
1220	Low Pulse 1
1221	Low Pulse 2
1222	Low Square
1223	Low Sine
1224	Low Triangle
1225	Low White Nz
1226	Low Pink Nz
1227	DC
1228	Reverse Cym

Arpeggio Style List/Chord Form List

Arpeggio Style List

USER (User Group)
PRST (Preset Group)

No.	Arpeggio Name	No.	Arpeggio Name
001	Basic 1	065	Bassline 4
002	Basic 2	066	Bassline 5
003	Basic 3	067	Bassline 6
004	Basic 4	068	Bassline 7
005	2 Tone Up	069	Bassline 8
006	3 Tone Up	070	Bassline 9
007	4 Tone Up	071	Bassline 10
008	2 Tone Down	072	Bassline 11
009	3 Tone Down	073	Bassline 12
010	4 Tone Down	074	Bassline 13
011	4 Tone Up&Down	075	Bassline 14
012	Seq Pattern 1	076	Bassline 15
013	Seq Pattern 2	077	Bassline 16
014	Seq Pattern 3	078	Bassline 17
015	Seq Pattern 4	079	Bassline 18
016	Seq Pattern 5	080	Bassline 19
017	Seq Pattern 6	081	Bassline 20
018	Seq Pattern 7	082	Bassline 21
019	Seq Pattern 8	083	Bassline 22
020	Seq Pattern 9	084	Bassline 23
021	Seq Pattern 10	085	Bassline 24
022	Seq Pattern 11	086	Guitar Arp 1
023	Seq Pattern 12	087	Guitar Arp 2
024	Seq Pattern 13	088	Guitar Arp 3
025	Seq Pattern 14	089	Gtr Backing 1
026	Seq Pattern 15	090	Gtr Backing 2
027	Seq Pattern 16	091	Gtr Backing 3
028	Seq Pattern 17	092	Gtr Backing 4
029	Seq Pattern 18	093	Gtr Backing 5
030	Seq Pattern 19	094	Key Backing 1
031	Seq Pattern 20	095	Key Backing 2
032	Seq Pattern 21	096	Key Backing 3
033	Seq Pattern 22	097	Key Backing 4
034	Seq Pattern 23	098	Key Backing 5
035	Seq Pattern 24	099	Key Backing 6
036	Seq Pattern 25	100	Key Backing 7
037	Seq Pattern 26	101	Key Backing 8
038	Seq Pattern 27	102	Key Backing 9
039	Seq Pattern 28	103	Key Backing 10
040	Seq Pattern 29	104	Key Backing 11
041	Seq Pattern 30	105	Key Backing 12
042	Seq Pattern 31	106	Key Backing 13
043	Seq Pattern 32	107	Key Backing 14
044	Seq Pattern 33	108	Key Backing 15
045	Seq Pattern 34	109	Key Backing 16
046	Seq Pattern 35	110	Phrase Backing 1
047	Seq Pattern 36	111	Phrase Backing 2
048	Seq Pattern 37	112	Phrase Backing 3
049	Seq Pattern 38	113	Phrase Backing 4
050	Seq Pattern 39	114	Phrase Backing 5
051	Seq Pattern 40	115	Phrase Backing 6
052	Seq Pattern 41	116	Phrase Backing 7
053	Seq Pattern 42	117	Phrase Backing 8
054	Seq Pattern 43	118	Phrase Backing 9
055	Seq Pattern 44	119	Phrase Backing10
056	Seq Pattern 45	120	Phrase Backing11
057	Seq Pattern 46	121	Phrase Backing12
058	Seq Pattern 47	122	Phrase Backing13
059	Seq Pattern 48	123	Phrase Backing14
060	Seq Pattern 49	124	Whole Note Trig
061	Seq Pattern 50	125	Half Note Trig
062	Bassline 1	126	Graphic Pattern1
063	Bassline 2	127	Graphic Pattern2
064	Bassline 3	128	Graphic Pattern3

* *Arpeggio Styles are common between Preset Group and User Group.*

Chord Form List

USER (User Group)
PRST (Preset Group)

No.	Chord Name	Constituent Notes of Chord Forms (when C4 is pressed)
001	C	C4, E4, G4
002	C 6	C4, E4, G4, A4
003	C Maj 7	C4, E4, G4, B4
004	C Maj 9	C4, E4, G4, B4, D5
005	C 6/9	C4, E4, G4, A4, D5
006	C aug	C4, E4, G#4
007	C -5	C4, E4, F#4
008	C 7	C4, E4, G4, A#4
009	C 7+5	C4, E4, G#4, A#4
010	C 7-5	C4, E4, F#4, A#4
011	C 7-9	C4, E4, G4, A#4, C#5
012	C 9	C4, E4, G4, A#4, D5
013	C 7+9	C4, E4, G4, A#4, D#5
014	C 9+5	C4, E4, G#4, A#4, D5
015	C 9-5	C4, E4, F#4, A#4, D5
016	C 11	C4, E4, G4, A#4, D5, F5
017	C +11	C4, E4, G4, A#4, D5, F#5
018	C 13	C4, E4, G4, A#4, D5, F5, A5
019	C 13+11	C4, E4, G4, A#4, D5, F#5, A5
020	C m	C4, D#4, G4
021	C m6	C4, D#4, G4, A4
022	C m Maj7	C4, D#4, G4, B4
023	C m Maj9	C4, D#4, G4, B4, D5
024	C m 6/9	C4, D#4, G4, A4, D5
025	C m7	C4, D#4, G4, A#4
026	C m7-5	C4, D#4, F#4, A#4
027	C m9	C4, D#4, G4, A#4, D5
028	C m9-5	C4, D#4, F#4, A#4, D5
029	C dim7	C4, D#4, F#4, A4
030	C dim9	C4, D#4, F#4, A4, D5
031	C sus4	C4, F4, G4
032	C 7sus4	C4, F4, G4, A#4
033	General 1	C3, G3, C4, E4
034	General 2	C3, G3, C4, D#4
035	General 3	C3, F3, A#4, D4
036	General 4	C3, G3, A#4, C4, D#4
037	General 5	C3, G3, A#4, D4, F4
038	General 6	C3, G#3, C4, D#4, G4
039	General 7	C3, B3, D4, E4, G4
040	General 8	C3, A#3, D4, E4, A4
041	General 9	C3, A#3, D4, F4, A4
042	General 10	C3, A#3, E4, A4, C5
043	General 11	C3, A#3, D4, D#4, G4
044	General 12	C3, A3, D4, D#4, G4
045	General 13	C3, A3, D4, G4
046	General 14	C2, G3, D#4, A#4, D5, F5
047	Cluster	A#2, F3, G3, C4
048	For Arpeggio 1	C2, E2, G2, C3, E3, G3, C4, E4, G4
049	For Arpeggio 2	C2, D#2, G2, C3, D#3, G3, C4, D#4, G4
050	For Arpeggio 3	C2, G2, C3, G3, C4, G4, C5, G5, C6
051	For Arpeggio 4	C2, G#2, C3, G#3, C4, G#4, C5, G#5, C6
052	Oct Stack 1	C4, C5
053	Oct Stack 2	C3, C4
054	5th Stack 1	C4, G4
055	5th Stack 2	G3, C4
056	4th Stack 1	C4, F4
057	4th Stack 2	F3, C4
058	Blue note Scale	C4, D#4, F4, F#4, G4, A#4
059	Bali Scale	C4, C#4, D#4, G4, G#4
060	Chinese Scale	C4, D4, E4, G4, A4
061	Japanese Scale	C4, C#4, F4, G4, A#4
062	Ryukyu Scale	C4, E4, F4, G4, B4
063	Gypsy Scale	C4, C#4, E4, F4, G4, G#4, B4
064	Spanish Scale	C4, C#4, E4, F4, G4, G#4, A#4

* *Chord Forms are common between Preset Group and User Group.*

* *1–32 are basic chords.*

* *33–64 are chords effective for arpeggio style.*

Rhythm Group List

USER (User Group)

No.	Pattern Name	Recommended Rhythm Set	Recommended Tempo (BPM)
01	Pop 1	USER:001 StandardKit3	BPM112
02	Pop 2	PRST:001 StandardKit1	BPM120
03	Pop 3	PRST:002 StandardKit2	BPM121
04	Pop 4	PRST:020 Nu Technica	BPM098
05	Pop 5	PRST:004 Rock Kit 1	BPM080
06	Pop 6	PRST:001 StandardKit1	BPM118
07	Pop 7	PRST:001 StandardKit1	BPM096
08	Rock 1	PRST:004 Rock Kit 1	BPM120
09	Rock 2	PRST:004 Rock Kit 1	BPM100
10	Fusion	PRST:001 StandardKit1	BPM112
11	Funk	PRST:001 StandardKit1	BPM103
12	Jazz	PRST:006 Brash Jz Kit	BPM224
13	HipHop 1	PRST:010 HipHop Kit 1	BPM090
14	HipHop 2	PRST:009 Limiter Kit	BPM090
15	R&B 1	PRST:014 R&B Kit	BPM120
16	R&B 2	PRST:012 HipHop&Latin	BPM090
17	Break Beats	PRST:011 Hip Hop Kit2	BPM155
18	Big Beat	PRST:005 Rock Kit 2	BPM115
19	Drum'n'Bass	PRST:018 Kit-Euro:Pop	BPM160
20	2 Step	PRST:018 Kit-Euro:Pop	BPM132
21	Trance	PRST:021 Machine Kit2	BPM136
22	Techno	PRST:022 ArtificalKit	BPM135
23	Electro	PRST:008 909 808 Kit	BPM120
24	Hardcore	PRST:022 ArtificalKit	BPM200
25	House	PRST:019 House Kit	BPM125
26	Disco	PRST:003 StandardKit3	BPM120
27	Reggae	PRST:001 StandardKit1	BPM078
28	Bossa	PRST:001 StandardKit1	BPM120
29	Latin	PRST:001 StandardKit1	BPM090
30	EL Samba	PRST:020 Nu Technica	BPM120
31	Tabla Phrases	PRST:032 Scrh&Voi&Wld	BPM120
32	*Graceful	USER:032 *PrstSmplKit	BPM140

PRST (Preset Group)

No.	Pattern Name	Recommended Rhythm Set	Recommended Tempo (BPM)
01	Pop 1	PRST:002 StandardKit2	BPM112
02	Pop 2	PRST:001 StandardKit1	BPM120
03	Pop 3	PRST:002 StandardKit2	BPM121
04	Pop 4	PRST:020 Nu Technica	BPM098
05	Pop 5	PRST:004 Rock Kit 1	BPM080
06	Pop 6	PRST:001 StandardKit1	BPM118
07	Pop 7	PRST:001 StandardKit1	BPM096
08	Rock 1	PRST:004 Rock Kit 1	BPM120
09	Rock 2	PRST:004 Rock Kit 1	BPM100
10	Fusion	PRST:001 StandardKit1	BPM112
11	Funk	PRST:001 StandardKit1	BPM103
12	Jazz	PRST:006 Brash Jz Kit	BPM224
13	HipHop 1	PRST:010 HipHop Kit 1	BPM090
14	HipHop 2	PRST:009 Limiter Kit	BPM090
15	R&B 1	PRST:014 R&B Kit	BPM120
16	R&B 2	PRST:012 HipHop&Latin	BPM090
17	Break Beats	PRST:011 Hip Hop Kit2	BPM155
18	Big Beat	PRST:005 Rock Kit 2	BPM115
19	Drum'n'Bass	PRST:018 Kit-Euro:Pop	BPM160
20	2 Step	PRST:018 Kit-Euro:Pop	BPM132
21	Trance	PRST:021 Machine Kit2	BPM136
22	Techno	PRST:022 ArtificalKit	BPM135
23	Electro	PRST:008 909 808 Kit	BPM120
24	Hardcore	PRST:022 ArtificalKit	BPM200
25	House	PRST:019 House Kit	BPM125
26	Disco	PRST:003 StandardKit3	BPM120
27	Reggae	PRST:001 StandardKit1	BPM078
28	Bossa	PRST:001 StandardKit1	BPM120
29	Latin	PRST:001 StandardKit1	BPM090
30	EL Samba	PRST:020 Nu Technica	BPM120
31	Tabla Phrases	PRST:032 Scrh&Voi&Wld	BPM120
32	Perc Phrases	PRST:031 Percussion	BPM120

* *The sound data (Rhythm Group and Rhythm Set) with * mark to the head of their names use the Preset Samples. Therefore, in order to play these sound data, the Preset Samples need to be loaded to Fantom-Xa.*

039			
040			
041			
042	Pop		
043	Pop 6-3		
044	Pop 6-4		
045	Pop 6-5		
046	Pop 6-6		
047	Pop 6-7		
048	Pop 6-8		
049	Pop 7-1		
050	Pop 7-2		
051	Pop 7-3		
052	Pop 7-4	PRST:001 StandardKit1	Br
053	Pop 7-5		
054	Pop 7-6		
055	Pop 7-7		
056	Pop 7-8		
057	Rock 1-1		
058	Rock 1-2		
059	Rock 1-3		
060	Rock 1-4	PRST:004 Rock Kit 1	BPM120
061	Rock 1-5		
062	Rock 1-6		
063	Rock 1-7		
064	Rock 1-8		
065	Rock 2-1		
066	Rock 2-2		
067	Rock 2-3		
068	Rock 2-4	PRST:004 Rock Kit 1	BPM100
069	Rock 2-5		
070	Rock 2-6		
071	Rock 2-7		
072	Rock 2-8		

130	
131	Break Beat
132	Break Beats 4
133	Break Beats 5
134	Break Beats 6
135	Break Beats 7
136	Break Beats 8
137	Big Beat 1
138	Big Beat 2
139	Big Beat 3
140	Big Beat 4
141	Big Beat 5
142	Big Beat 6
143	Big Beat 7
144	Big Beat 8

No.	Pattern Name	Recommended Rhythm Set	Recommended Tempo (BPM)
145	Drum'n'Bass 1		
146	Drum'n'Bass 2		
147	Drum'n'Bass 3		
148	Drum'n'Bass 4	PRST:018 Kit-Euro:Pop	BPM160
149	Drum'n'Bass 5		
150	Drum'n'Bass 6		
151	Drum'n'Bass 7		
152	Drum'n'Bass 8		
153	2 Step 1		
154	2 Step 2		
155	2 Step 3		
156	2 Step 4	PRST:018 Kit-Euro:Pop	BPM132
157	2 Step 5		
158	2 Step 6		
159	2 Step 7		
160	2 Step 8		
161	Trance 1		
162	Trance 2		
163	Trance 3		
164	Trance 4	PRST:021 Machine Kit2	BPM136
165	Trance 5		
166	Trance 6		
167	Trance 7		
168	Trance 8		
169	Techno 1		
170	Techno 2		
171	Techno 3		
172	Techno 4	PRST:022 ArtificalKit	BPM135
173	Techno 5		
174	Techno 6		
175	Techno 7		
176	Techno 8		
177	Electro 1		
178	Electro 2		
179	Electro 3		
180	Electro 4	PRST:008 909 808 Kit	BPM120
181	Electro 5		
182	Electro 6		
183	Electro 7		
184	Electro 8		
185	Hardcore 1		
186	Hardcore 2		
187	Hardcore 3		
188	Hardcore 4	PRST:022 ArtificalKit	BPM200
189	Hardcore 5		
190	Hardcore 6		
191	Hardcore 7		
192	Hardcore 8		
193	House 1		
194	House 2		
195	House 3		
196	House 4	PRST:019 House Kit	BPM125
197	House 5		
198	House 6		
199	House 7		
200	House 8		
201	Disco 1		
202	Disco 2		
203	Disco 3		
204	Disco 4	PRST:003 StandardKit3	BPM120
205	Disco 5		
206	Disco 6		
207	Disco 7		
208	Disco 8		
209	Reggae 1		
210	Reggae 2		
211	Reggae 3		
212	Reggae 4	PRST:001 StandardKit1	BPM078
213	Reggae 5		
214	Reggae 6		
215	Reggae 7		
216	Reggae 8		

No.	Pattern Name	Recommended Rhythm Set	Recommended Tempo (BPM)
217	Bossa 1		
218	Bossa 2		
219	Bossa 3		
220	Bossa 4	PRST:001 StandardKit1	BPM120
221	Bossa 5		
222	Bossa 6		
223	Bossa 7		
224	Bossa 8		
225	Latin 1		
226	Latin 2		
227	Latin 3		
228	Latin 4	PRST:001 StandardKit1	BPM090
229	Latin 5		
230	Latin 6		
231	Latin 7		
232	Latin 8		
233	El Samba 1		
234	El Samba 2		
235	El Samba 3		
236	El Samba 4	PRST:020 Nu Technica	BPM120
237	El Samba 5		
238	El Samba 6		
239	El Samba 7		
240	El Samba 8		
241	Tabla Phrase 1		
242	Tabla Phrase 2		
243	Tabla Phrase 3		
244	Tabla Phrase 4	PRST:032 Scrh&Voi&Wld	BPM120
245	Tabla Phrase 5		
246	Tabla Phrase 6		
247	Tabla Phrase 7		
248	Tabla Phrase 8		

USER (User Group)

No.	Pattern Name	Recommended Rhythm Set	Recommended Tempo (BPM)
249	*Graceful 1		
250	*Graceful 2		
251	*Graceful 3		
252	*Graceful 4	USER:032 *PrstSmpl Kit	BPM140
253	*Graceful 5		
254	*Graceful 6		
255	*Graceful 7		
256	*Graceful 8		

* *The sound data (Rhythm Pattern and Rhythm Set) with * mark to the head of their names use the Preset Samples. Therefore, in order to play these sound data, the Preset Samples need to be loaded to Fantom-Xa.*

PRST (Preset Group)

No.	Pattern Name	Recommended Rhythm Set	Recommended Tempo (BPM)
249	Perc Phrase 1		
250	Perc Phrase 2		
251	Perc Phrase 3		
252	Perc Phrase 4	PRST:031 Percussion	BPM120
253	Perc Phrase 5		
254	Perc Phrase 6		
255	Perc Phrase 7		
256	Perc Phrase 8		

About MIDI

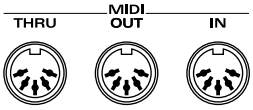
MIDI (Musical Instruments Digital Interface) is a standard specification that allows musical data to be exchanged between electronic musical instruments and computers. MIDI With a MIDI cable connecting MIDI devices that are equipped with MIDI connectors, you can play multiple instruments with a single keyboard, have multiple MIDI instruments perform in ensemble, program the settings to change automatically to match the performance as the song progresses, and more.

If you mainly use the Fantom-Xa as a standalone keyboard instrument, you may really not need to know much at all about MIDI.

However, the following MIDI-related information is provided so you can play the Fantom-Xa using an external MIDI device, or master other advanced techniques.

About MIDI Connectors

The Fantom-Xa is equipped with the three types of MIDI connectors, each which works differently.



MIDI IN Connector

This connector receives MIDI messages that are transmitted from external MIDI devices. The Fantom-Xa can receive these messages to play notes or select sounds, etc.

MIDI OUT Connector

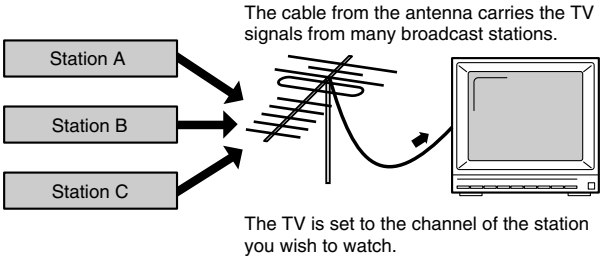
This connector transmits MIDI messages to external MIDI devices. The Fantom-Xa's MIDI OUT connector is used for sending the performance data of the keyboard controller section as well as data used for saving various settings and patterns.

MIDI THRU Connector

MIDI messages received at MIDI IN are re-transmitted without change from this connector to an external MIDI device. Use this in situations such as when you use multiple MIDI devices simultaneously.

MIDI Channels and Multi-timbral Sound Generators

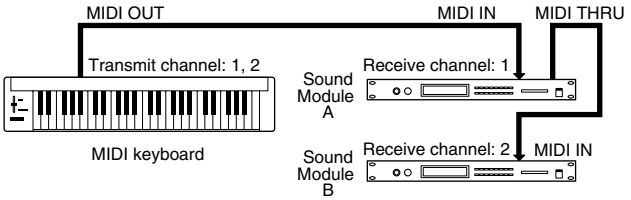
MIDI transmits many types of data over a single MIDI cable. This is made possible by the concept of **MIDI channels**. MIDI channels allow messages intended for a given instrument to be distinguished from messages intended for another instrument. In some ways, MIDI channels are similar to television channels. By changing the channel on a television set, you can view the programs that are being broadcast by different stations. In the same way, MIDI also allows a device to select the information intended for that device out of the variety of information that is being transmitted to it.



MIDI uses sixteen channels; 1 through 16. Set the receiving device so that it will receive only the channel that it needs to receive.

Example:

Set the Fantom-Xa to send Channel 1 and Channel 2, then set sound module A to receive only Channel 1 and sound module B only Channel 2. With this setup, you can get an ensemble performance, with, for example, a guitar sound from sound module A and bass from sound module B.



When used as a sound module, the Fantom-Xa can receive on up to sixteen MIDI channels. Sound modules like the Fantom-Xa which can receive multiple MIDI channels simultaneously to play different sounds on each channel are called multi-timbral sound modules.

General MIDI

General MIDI is a set of recommendations which seeks to provide a way to go beyond the limitations of proprietary designs, and standardize the MIDI capabilities of sound generating devices. Sound generating devices and music files that meet the General MIDI standard bear the General MIDI logo (GENERAL MIDI). Music files bearing the General MIDI logo can be played back using any General MIDI sound generating unit to produce essentially the same musical performance.

General MIDI 2

The upwardly compatible General MIDI 2 (GENERAL MIDI2) recommendations pick up where the original General MIDI left off, offering enhanced expressive capabilities, and even greater compatibility. Issues that were not covered by the original General MIDI recommendations, such as how sounds are to be edited, and how effects should be handled, have now been precisely defined. Moreover, the available sounds have been expanded. General MIDI 2 compliant sound generators are capable of reliably playing back music files that carry either the General MIDI or General MIDI 2 logo.

In some cases, the conventional form of General MIDI, which does not include the new enhancements, is referred to as "General MIDI 1" as a way of distinguishing it from General MIDI 2.

(Sound Generator Section)
Model Fantom-Xa

MIDI Implementation Chart

Date : Aug. 1, 2004
Version : 1.00

Function...		Transmitted	Recognized	Remarks
Basic	Default	1–16	1–16	
Channel	Changed	1–16	1–16	Memorized
Mode	Default	Mode 3	Mode 3	
	Messages	Mono, Poly	Mode 3, 4 (M = 1)	* 2
	Altered	**********		
Note Number :	True Voice	0–127 **********	0–127 0–127	
Velocity	Note On	O	O	
	Note Off	O	O	
After Touch	Key's	X	O *1	
	Channel's	O	O *1	
Pitch Bend		O	O *1	
Control Change	0, 32	O *1	O *1	Bank select
	1	O	O *1	Modulation
	2	O	O	Breath type
	4	O	O	Foot type
	5	O	O	Portamento time
	6, 38	O	O	Data entry
	7	O	O *1	Volume
	8	O	X	Balance
	10	O	O *1	Panpot
	11	O	O *1	Expression
	16	O	X	General purpose controller 1
	17	O	X	General purpose controller 2
	18	O	X	General purpose controller 3
	19	O	X	General purpose controller 4
	64	O	O *1	Hold 1
	65	O	O	Portamento
	66	O	O	Sostenuto
	67	O	O	Soft
	68	O	O	Legato foot switch
	69	O	O	Hold 2
	70	O	X	Sound variation
	71	O	O	Resonance
	72	O	O	Release time
	73	O	O	Attack time
	74	O	O	Cutoff
	75	O	O	Decay time
	76	O	O	Vibrato rate
	77	O	O	Vibrato depth
	78	O	O	Vibrato delay
	80	O	O (Tone 1 Level)	General purpose controller 5
	81	O	O (Tone 2 Level)	General purpose controller 6
	82	O	O (Tone 3 Level)	General purpose controller 7
	83	O	O (Tone 4 Level)	General purpose controller 8
	84	O	O	Portamento control
	91	O	O (Reverb)	General purpose effects 1
	92	O	X	Tremolo
	93	O	O (Chorus)	General purpose effects 3
	94	O	X	Celeste
	95	O	X	Phaser
	1–31, 64–95	O	O	Pedal, Knob, D Beam
	98, 99	X	X	NRPN LSB, MSB
	100, 101	X	O	RPN LSB, MSB
Program Change	: True Number	O *1 **********	O *1 0–127	Program No. 1–128
System Exclusive		O	O *1	
System Common	: Song Position	X	X	
	: Song Select	X	X	
	: Tune Request	X	X	
System Real Time	: Clock	X	X	
	: Commands	X	X	
Aux Messages	: All Sound Off	X	O	
	: Reset All Controllers	O *3	O	
	: Local On/Off	X	X	
	: All Notes Off	O *3	O (123–127)	
	: Active Sensing	O *1	O	
	: System Reset	X	X	
Notes		* 1 O X is selectable. * 2 Recognized as M=1 even if M≠1.	* 3 Transmitted only when V-LINK is ON.	

Mode 1 : OMNI ON, POLY
Mode 2 : OMNI ON, MONO
Mode 3 : OMNI OFF, POLY
Mode 4 : OMNI OFF, MONO

O : Yes
X : No

(Sequencer Section) Date : Aug. 1, 2004

Model Fantom-Xa

MIDI Implementation Chart

Version : 1.00

Function...		Transmitted	Recognized	Remarks
Basic Channel	Default	All channel	All channel	There is no specific basic channel.
	Changed	X	1–16	
Mode	Default	X	X	
	Messages	X	X	
	Altered	**********		
Note Number :	True Voice	0–127 **********	0–127 0–127	
Velocity	Note On	O	O	
	Note Off	O	O	
After Touch	Key's	O	O *1	
	Channel's	O	O *1	
Pitch Bend		O	O *1	
Control Change	0–119	O	O *1	
Program Change	: True Number	O **********	O *1 0–127	
System Exclusive		O	O *1	
System Common	: Quarter Frames	O *1	O *2	
	: Song Position	O *1	O *1	
	: Song Select	X	X	
	: Tune Request	O	O	
System Real Time	: Clock	O *1	O *1	
	: Commands	O *1	O *1	
Aux Messages	: All Sound Off	O	O	
	: Reset All Controllers	O	O	
	: Local On/Off	X *2	X	
	: All Notes Off	O *3	O (123–127) *3	
	: Active Sensing	O	O	
	: System Reset	X	X	
Notes		*1 O X is selectable. *2 Not stored/transmitted when received, but can be created and transmitted using Microscope. *3 Mode Messages (123–127) are recorded and transmitted, after all currently sounding notes are turned off. The All Note Message itself is not recorded or transmitted. However, it can be created in Microscope and transmitted.		

Mode 1 : OMNI ON, POLY Mode 2 : OMNI ON, MONO O : Yes

Mode 3 : OMNI OFF, POLY Mode 4 : OMNI OFF, MONO X : No

Specifications

Fantom-Xa:
Synthesizer Keyboard (Conforms to General MIDI 2 System)

Keyboard

61 keys (with velocity)

Sound Generator Section

Maximum Polyphony

128 voices (shared with the sampling section)

Parts

16 parts

Wave Memory

64 M bytes (16-bit linear equivalent)

Waveforms

1,228

Preset Memory

Patches:	768 + 256 (GM2)
Rhythm Sets:	36 + 9 (GM2)
Performances:	64

User Memory

Patches:	256
Rhythm Sets:	32
Performances:	64

Card Memory (PC card)

Patches:	256
Rhythm Sets:	32
Performances:	64

Effects

Multi-Effects:	3 systems, 78 types
Chorus:	3 types
Reverb:	5 types
Input Effects:	6 types
Mastering Effects:	3-band compressor

Sampling Section

Data Format

16-bit linear (File Type: .WAV/.AIFF)

Sampling Frequency

44.1 kHz (fixed)

Maximum Sampling Time

- When sampling memory isn't expanded (4 MB)
  mono: 47 sec. approx., stereo: 23.5 sec. approx.
- When sampling memory is expanded with DIMM (516 MB)
  mono: 102 min. approx., stereo: 51 min. approx.

Number of Samples

User memory: 2,000 (maximum total approximately 16 MB)
Card memory: 7,000 (PC card)

Sequencer Section

Tracks

Phrase tracks (16 MIDI channels per track): 16
Tempo track: 1
Beat track: 1
Patterns: 100

Resolution

480 TPQN

Tempo

5–300

Note Capacity

approx. 400,000 notes

Song Length

9,998 measures

Recording Method

Realtime recording, Step recording

Others

Arpeggiator

Preset: 128
User: 128

Rhythm Pattern

Preset: 256 (32 groups)
User: 256 (32 groups)

Chord Memory

Preset: 64
User: 64

Display

240 x 64 dots graphic LCD (with backlit)

Pad Buttons

10 pads (Trigger/Category Selection/Numeric Keys)

Controllers

Pitch Bend/Modulation Lever
Control Knob x 4
Assignable Switch x 2
D Beam Controller

Connectors

Headphones Jack
A (MIX) Output Jacks (L/MONO, R): 1/4 inch phone type
B Output Jacks (L, R): 1/4 inch phone type
Input Jacks (L/MONO/MIC, R): 1/4 inch phone type
Hold Pedal Jack (Half Pedal recognition)
Control Pedal Jack (assignable)
MIDI Connectors (IN, OUT, THRU)
USB Connector (supports file transfer and MIDI)
AC Adaptor Jack

Expansion Slots

- Expansion of waveforms and patches for the internal sound generator
  SRX expansion board: 1 slot
- Expansion of sampling memory
  DIMM: 1 slot (supports 128 MB, 256 MB, 512 MB (3.3 V))

External Storage Device

PC Card: 1 slot (supports SmartMedia and CompactFlash using a PC card adaptor)

Power Supply

DC 9 V (AC Adaptor)

Current draw

1200 mA

Dimensions

1065 (W) x 358 (D) x 114 (H) mm
41-15/16 (W) x 14-1/8 (D) x 4-1/2 (H) inches

Weight

10.9 kg / 24 lbs 1 oz (excluding AC Adaptor)

Accessories

Owner's Manual
CD-ROM (Editor, USB MIDI driver)
PC Card Protector
AC Adaptor (PSB-1U)

Options

Wave Expansion Board: SRX Series
Keyboard Stand: KS-12
Pedal Switch: DP-2, DP-8
Foot Switch: BOSS FS-5U
Expression Pedal: EV-5

* *In the interest of product improvement, the specifications and/or appearance of this unit are subject to change without prior notice.*

* *A separate publication titled "MIDI Implementation" is also available. It provides complete details concerning the way MIDI has been implemented on this unit. If you should require this publication (such as when you intend to carry out byte-level programming), please contact the nearest Roland Service Center or authorized Roland distributor.*

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For the USA

DECLARATION OF CONFORMITY
Compliance Information Statement

Model Name :	Fantom-Xa
Type of Equipment :	Synthesizer Keyboard
Responsible Party :	Roland Corporation U.S.
Address :	5100 S. Eastern Avenue, Los Angeles, CA 90040-2938
Telephone :	(323) 890-3700

For EU Countries

CE

This product complies with the requirements of European Directive 89/336/EEC.

For the USA

FEDERAL COMMUNICATIONS COMMISSION
RADIO FREQUENCY INTERFERENCE STATEMENT

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and
(2) This device must accept any interference received, including interference that may cause undesired operation.

Unauthorized changes or modification to this system can void the users authority to operate this equipment.
This equipment requires shielded interface cables in order to meet FCC class B Limit.

For Canada

NOTICE

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

AVIS

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

Information

When you need repair service, call your nearest Roland Service Center or authorized Roland distributor in your country as shown below.

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